

Crusoe ESG Report

2022





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About Us



Our ESG Roadmap

Crusoe is reporting for the first time on our environmental, social and governance achievements, initiatives and commitments.



Letter from the Founders

Since the earliest days of Crusoe's founding in 2018, our vision has been to build a company wherein the right environmental choice is also the right one for the business.

The publication of our inaugural Environmental, Social and Governance (ESG) Report is an important milestone at Crusoe and an opportunity to showcase our values and goals as a company.

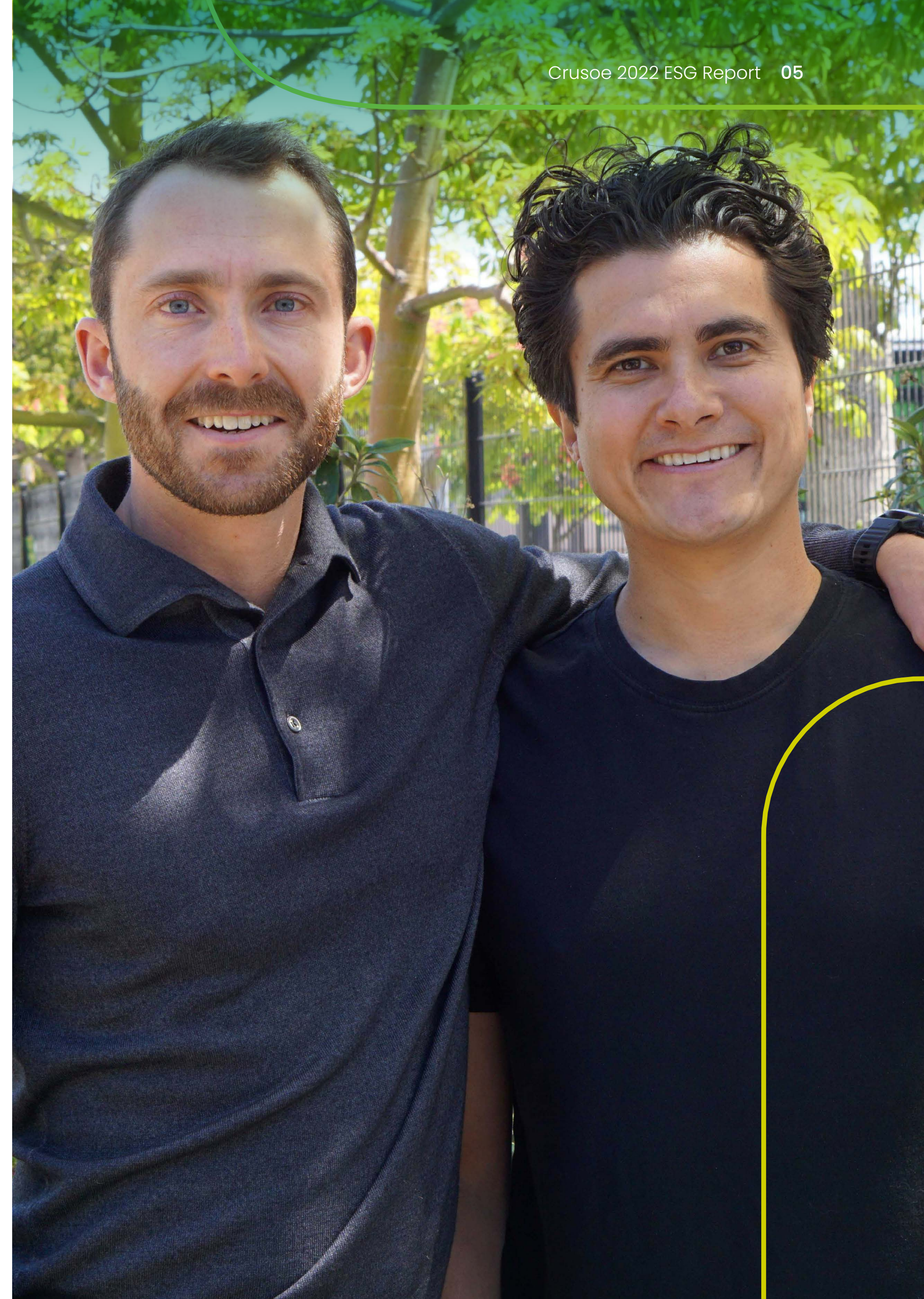
Since the earliest days of Crusoe's founding in 2018, our vision has been to build a company wherein the right environmental choice is also the right one for the business. By creating this mutually reinforcing cycle, economic incentives support and scale operations that best align with environmental and societal goals. Five years later, this kind of positive feedback loop between economics and environmental goals is at the heart of Crusoe's operations.

Our north star at Crusoe is our environmental impact. Crusoe's mission is to align the future of computing with the future of the climate. In practical terms, that means we deploy advanced computing infrastructure in ways that solve climate challenges by reducing flaring, reducing greenhouse gas emissions or incentivizing the deployment of renewable power sources. Our goal is to mitigate climate change by supporting and enabling the energy transition by both cleaning up traditional energy sources and accelerating the development of new climate-aligned energy sources through our computing products and our cloud computing service, Crusoe Cloud. In this way, we support both sides of the energy transition.

The pressure to mitigate climate change has never been more urgent and Crusoe's work has never mattered more. Mainstream climate conversations have historically focused on the absolute level of CO₂ in the atmosphere, but our view is that the rate of change is the better indicator of climate risk, especially when we expand our view beyond human impacts to include broader impacts on biodiversity. The use of fossil fuels, agriculture and human industry are increasing the concentration of CO₂-equivalents (CO₂e) in the atmosphere by 5-10% per decade, an unprecedented speed that is hundreds, if not thousands, of times faster than any sustained rates observed throughout the geological record.

Methane is a major contributor to this rapid change.

Methane is a short-lived super pollutant – a super-charged greenhouse gas that very quickly accelerates warming, delivering most of its warming impact within just 20 years of being emitted into the atmosphere. Eliminating methane emissions allows humanity to quickly slow down the rate of climate change and extend the climate runway, buying much-needed time for clean and renewable energy systems to scale. And this is where Crusoe is making a difference.





By the end of 2022, Crusoe operated approximately 80 megawatts of computing infrastructure powered primarily by flared natural gas – energy that would have otherwise been burned wastefully in the air. We accomplished this through our Digital Flare Mitigation® (DFM) technology, which eliminates 99% of methane emissions relative to continued flaring. We're beginning to move the needle on flaring in the oil production process, having prevented over 4 billion cubic feet of gas from being flared in 2022 to create over 500,000 megawatt hours of power. Crusoe's carbon accounting, detailed in this report, showcases the emissions impact that we were able to achieve by preventing flaring. For every ton of CO₂e emissions we produced, we reduced over 1.6 tons of CO₂e by avoiding methane emissions. To our knowledge, Crusoe is the only scaled provider of computing infrastructure that creates a net reduction in emissions.

In addition to DFM, Crusoe is developing new capabilities and operations around Digital Renewables Optimization™ (DRO) technology, our approach to deploying computing infrastructure in a way that incentivizes and accelerates renewable energy development.


All of this climate-aligned energy is used to power Crusoe's advanced computing capabilities, which have grown to include scaled offerings around artificial intelligence, graphical rendering, scientific computing and digital currency mining.

Beyond our core environmental mission, this report will also highlight Crusoe's commitment to our employees and key social initiatives. Crusoe contributed meaningful investments of time and funding toward the advancement of Science, Technology, Engineering and Math (STEM) education in the communities where we operate – something that aligns closely with our vision of a better future enabled by technology. Additionally, we made important strides towards increasing the diversity of our team, especially in management and leadership positions and we are proud that the Crusoe workforce is more gender diverse and racially diverse than energy industry and technology industry workforce benchmarks. We continue to strive for greater representation and diversity within our company.

We are grateful to the many talented team members who collaborated to bring Crusoe's first ESG report to fruition. However, this report is just a starting point. Over the years to come, our intention is to continuously improve from this baseline – to scale our beneficial impact on the environment and society and to transparently measure and eliminate negative impacts along the way.

Ultimately, this report is as much for Crusoe's own employees as it is for external readers. As co-founders, we want to build a company that every employee is proud to be a part of – a place where we can all do the most meaningful work of our careers together. We sincerely appreciate you joining us for this journey and look forward to making Crusoe better every year going forward.

Thank you,
Chase and Cully



Ensuring that the benefits we're gaining from all of this new technology development are responsibly sourced in a sustainable fashion that are going to maintain our planet as an inhabitable place 100 years from now is the primary problem that we're trying to solve.

CHASE LOCHMILLER
CEO



ESG Snapshot

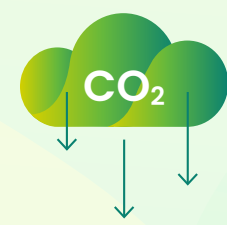
Environmental

- Reduce the environmental impacts of computing and energy production by powering computing with wasted energy resources.
- Support the clean energy transition by reducing flaring and methane emissions and accelerating clean energy development.

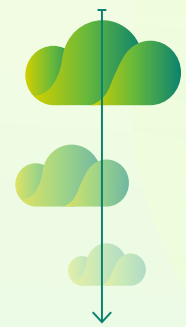
2022 Achievements



Reduced natural gas flaring by over **4 billion cubic feet.**



Avoided **6,400 metric tons of methane emissions**, equivalent to **528,000 metric tons of CO₂e.**



Reduced over **60% more emissions** than we generated in our operations, leading to **net- negative emissions.**

Social

- Center employee attraction, development and retention strategy around Crusoe’s mission and values.
- Promote employee health, wellness, safety, financial security and professional development.
- Support access to STEM education and innovation in local communities.

2022 Achievements



Received national and local **recognitions for the company’s culture, diversity and leadership.**



Achieved 650,000 man-hours without a recordable injury to an employee or contractor over two years.



Brought the **CSforALL Accelerator Program** to the **Denver Public Schools** system.

Governance

- Enhance ESG governance and embed ESG into business strategy, operations and stakeholder engagement.
- Establish responsible business policies and guidelines.

2022 Achievements



Established **Executive-level ESG Committee** and hired **Senior Director of ESG.**



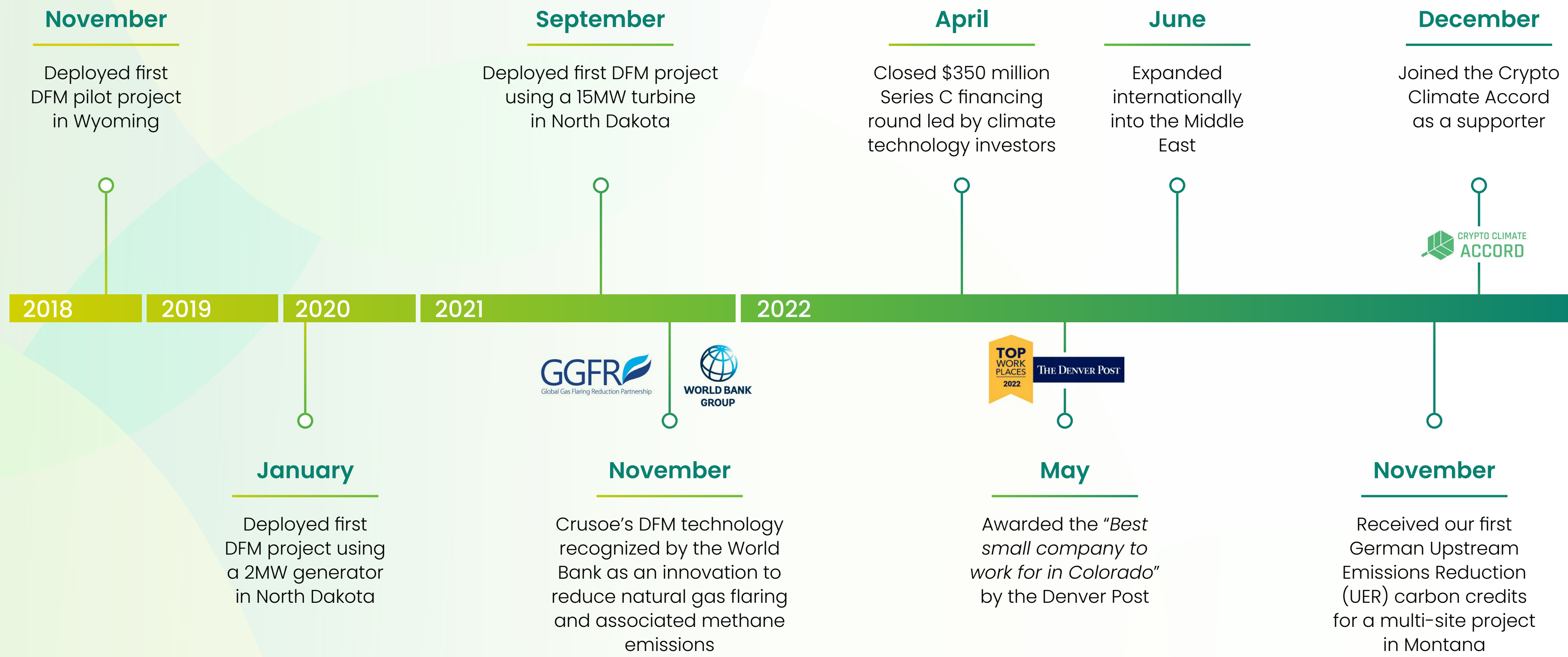
Developed **Sustainable Project Selection Framework** and **Code of Conduct.**



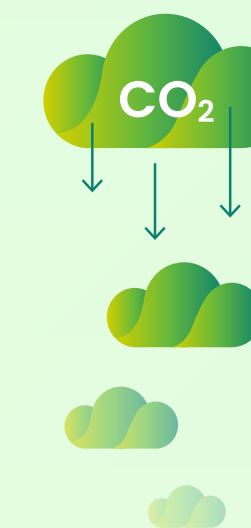
Became a supporter of the **Crypto Climate Accord.**

ESG Highlights

Since launching in 2018, Crusoe has reached many operational and ESG milestones.



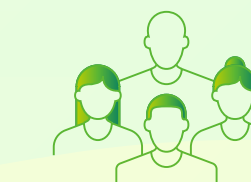
Achievements Reached in 2022



Crusoe diverted over **6 billion cubic feet of natural gas** from flaring since the company launched, resulting in over **750,000 metric tons** of CO₂-equivalent emissions avoided.



Crusoe launched our **180th** data center.



Crusoe expanded our workforce to almost **300 employees**.



Crusoe reached **2 years** and over **650,000 man-hours** worked without a recordable injury.



Crusoe completed and published our **first comprehensive greenhouse gas inventory**, covering Scopes 1, 2 and 3 for 2021.



Who We Are

Crusoe is grounded in a set of values and actionable practices to improve the environmental performance of the energy and computing industries.



Our Mission

Crusoe aligns the future of computing with the future of the climate.

Crusoe is a technology company dedicated to driving change in sustainable computing by harnessing wasted and stranded energy sources to power distributed computing infrastructure at an industrial scale.

We were inspired by the story of Robinson Crusoe, who, when isolated on a deserted island, was driven to use creativity and innovation to manage his resources. This aspect of Robinson Crusoe's character embodies our company's journey – to uncover new ways to capture and use stranded energy across distributed locations to power data centers.

Crusoe's technologies help solve the environmental challenge of the computing industry's growing energy demand by addressing an environmental challenge of the oil industry – wasted energy and emissions from flaring. Crusoe's goal is to unlock the value of otherwise wasted resources, such as flared natural gas or excess generation from clean and renewable energy sources.

On one side of the business, Crusoe captures flared natural gas from oil fields, ultimately reducing methane emissions and improving the environmental performance of major global energy sources. We increase efficiency in the oil industry and build relationships with both communities and regulators to promote positive and lasting change.

At the same time, as the world is quickly shifting to cloud computing, technology innovators store and process vast quantities of data to power tailored services for individual users through new and energy-intensive applications. In particular, recent advances in artificial intelligence (AI) such as OpenAI's GPT-4 large language model, have only increased the need for powerful and power-hungry computation.

Crusoe fuels this booming demand by utilizing these stranded energy sources and co-locating vertically integrated data centers on-site with energy producers. These data centers, with their associated compute, storage and networking resources, are specifically tailored to run energy-intensive workloads such as AI training, AI inference, high-performance computing, 3D rendering and cryptocurrency mining ("mining") – efficiently and economically.

Advanced computing is a climate opportunity, rather than a climate risk, when properly and thoughtfully managed.

By harnessing stranded energy, we are not only reducing the amount of wasted energy, but also helping support and drive important and growing industries that require significant amounts of computing power. This reduces the environmental impact of these sectors, allowing them to operate in a more efficient, climate-aligned and cost-effective manner.





Our Mission

A Solution to Tally's Law

Over the past two centuries, fossil energies have fueled the transition to modern economies around the world, supporting numerous industries, enabling new technologies and innovations and raising quality of life. Oil and natural gas have proven to be versatile, highly efficient energy carriers complementing coal to support the industrialization of economies and the expansion of local and global transportation.

The resulting economic growth set off an unprecedented population boom and drastically improved people's living conditions through enhanced agricultural productivity – and the related increases in food quality and availability – better public health and sanitation systems, expanded mobility and technical innovations, global commerce, advanced industries and many others.

While economic growth enabled by fossil fuels transformed human societies and relieved poverty across broad swaths of the global economy, it also resulted in the release of substantial amounts of greenhouse gasses (GHG), such as carbon dioxide and methane, into the atmosphere. According to the [U.S. National Oceanic and Atmospheric Administration](#) (NOAA), an estimated 1.5 trillion tons of carbon dioxide has been emitted since the industrial revolution started.

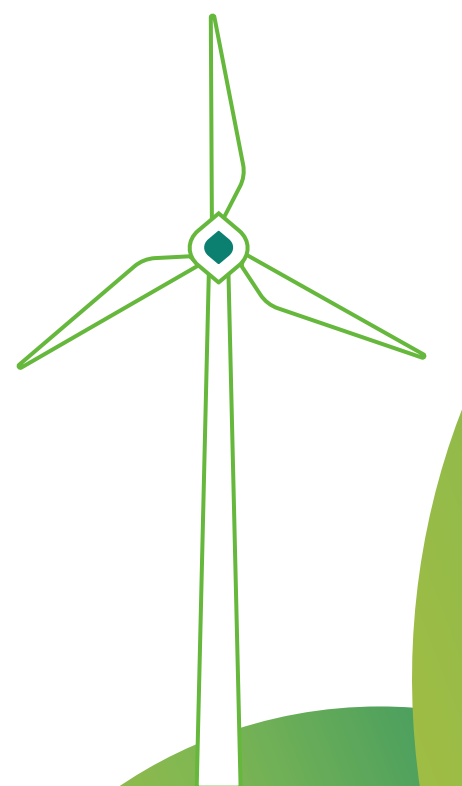
Recognizing the complex duality between energy-driven human prosperity growth and climate-driven ecosystem risk impacts, Crusoe's co-founder, Cully Cavness, theorized [Tally's Law](#).

Tally's Law states that in a world with constant or depleting natural resources, any increase in population or living conditions, which imply increased energy consumption, negatively impacts the environment – unless new technologies enable a more efficient and cleaner energy system.

Crusoe's technologies provide an answer to the challenge described in Tally's Law. By repurposing wasted energy – natural gas released during the oil extraction process that is vented or flared and renewable and clean electricity that cannot be fully transmitted on the grid – to power data centers, we offer an environmental solution to power the compute industry's growing energy demand.

This is particularly critical for computing applications such as AI and machine learning (ML), which are expected to be central to many businesses of the future. As the world becomes more digitized and connected, more power will be needed to enable advanced services and technologies. Up to [8% of the global electricity demand in 2030](#) will result from data centers and data transmission network needs (up from about 2% currently).

Formula for Tally's Law:
Resources x Technology = Population x Quality of Life x Environmental Health (rt=pqv)





From Friendship to Growing an Innovative Business

While the team behind Crusoe brings together a wide range of expertise, its foundation is deeply rooted in friendship.

Before launching Crusoe in 2018, Chase Lochmiller, Crusoe's Chief Executive Officer (CEO), spent time in the cryptocurrency sphere, serving as General Partner of a well-known crypto-asset hedge fund and has a background in the computer science of machine learning and artificial intelligence. Cully Cavness, Crusoe's President and Chief Operating Officer (COO), was previously the Vice President of Finance at a natural resources company and has a background in the energy industry. The two grew up together in Colorado and have since established Crusoe's headquarters in Denver.

Chase and Cully joined forces with a shared goal: to connect cross-industry environmental and economic outcomes in order to address waste in the energy space and the high energy demand in the computing industry.

During Crusoe's early development, the company raised \$150 million in equity capital from venture capital funds, including notables such as Founders Fund, Bain Capital Ventures and Valor Equity Partners. In 2022, Crusoe successfully closed a \$350 million Series C financing round led by climate technology investors G2 Venture Partners along with participation from Lowercarbon Capital, My Climate Journey (MCJ), Inclusive Capital Partners, Engine No. 1, FootPrint Coalition, and other leading investors such as Valor Equity Partners. This influx of capital enabled Crusoe's operational expansion and allowed us to develop new technologies and projects to further innovate in the energy and computing sectors.

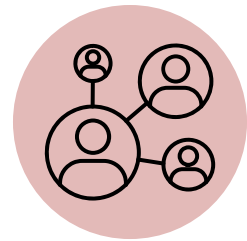




Our Values

The values are everywhere – in every meeting and decision made, it all goes back to our values.

JILL LLOYD
Director, People Team



Cultivate an idea meritocracy

We constantly strive to pursue iterative improvements to the status quo and find new ways of unlocking value. We want our team members to:

- **Challenge ideas and respect people** by engaging in respectful debate, with a focus on idea improvement and finding ways to make them better.
- **Find the best solution** by remaining vigilant to potential improvements and embracing feedback to catalyze inspiration and iterative innovation.



Think like a mountaineer

Crusoe's operations are like climbing a mountain, where goals are achievable but challenging and require planning and preparedness. We ask our employees to become operational mountaineers through:

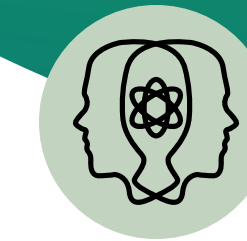
- **Intense preparation**, to ensure they are ready for any scenario that might arise.
- **Safety first, second and third** for ourselves and others by operating with thoughtfulness, caution and care.
- **Mastery of our tools**, so we know how to properly use them to benefit our jobs.
- **Enduring the expedition** by committing to persistent, focused execution throughout the journey and celebrating the hard work involved in doing things the right way.



Relentless commitment to resource efficiency

We are focused on doing more with less and driven to make a material difference when it comes to the human footprint on the environment. One of our main goals is reducing the oil industry's impact on the environment. We aim to:

- **Make oil companies better** by making them more efficient so we can reduce their impacts on the environment and our planet.
- **Find treasure in the trash and opportunity in the margin** by innovating and using what others see as waste to do more with less and make the greatest impact with the available resources.
- **Kill inefficiency with invention** through constant curiosity and exploration, revisiting assumptions, leveraging technology and inspiring ideation.



Tap into the collective genius

We leverage the power of collective knowledge drawn from a diverse set of experiences, skills and expertise. We solve big problems that have never been solved before by tapping into our collective genius to unlock innovation and new potential. We improve because we:

- **Know the strength of others** by fostering interpersonal relationships. Our peers are our most powerful tools and our strengths complement each other and benefit the whole.
- **Level up the team** by teaching others, raising their game and pushing others to improve to increase the team's potential.



Be and become your best self

We challenge our team members to produce their best work, break through to new levels of personal achievement and grow into the greatest versions of themselves. We champion this personal growth by:

- **Always learning** to expand our understanding of the world and investing in ourselves to grow our future impact.
- **Playing to our strengths** and finding ways to be great.
- **Seeking out feedback from others** to gain valuable perspectives and insights.



Our Business

Crusoe is on a mission to align the future of computing with the future of climate by harnessing wasted and stranded energy to power modular data centers.



Crusoe's Clean Computing Business

Crusoe is a clean computing infrastructure company that sits at the intersection of energy technology innovation and advanced computing.

Innovation requires energy, and sometimes, extraordinary innovation requires extraordinary amounts of energy. As computing becomes more advanced, computationally-intensive activities have become increasingly more energy intensive. On the other side of the equation, there is a tremendous amount of produced energy that goes to waste every year.

According to the [World Bank's 2022 Global Gas Flaring Tracker Report](#), 144 billion cubic meters (bcm) of natural gas was flared in 2021. That much gas could have generated 1,800 Terawatt hours (TWh) of energy – or almost two-thirds of the European Union's net domestic electricity generation. Instead, it was burned away with no discernible value. Crusoe is working to change that.

By co-locating data centers near stranded energy, we are capturing and utilizing otherwise wasted energy and using it to power the innovative computing needs of our future.

Innovators can't afford to ignore their negative environmental impacts; at Crusoe, we enable high-performance computing in a way that actually improves the environment – helping to drive humanity's shared progress.

Globally...

144 billion cubic meters
of natural gas was flared in 2021.

It could have generated

1,800 Terawatt hours
of energy instead of being wasted.

World Bank Global Gas Flaring Reduction Partnership





A Dual-Industry System to Drive Impact

Crusoe creates a dual-industry system by co-locating data centers near stranded energy assets.

Climate-Aligned Computing

Cloud Computing

Sustainably powering energy-intensive computing workloads

Crusoe Cloud empowers innovators to solve the world's biggest challenges with climate-aligned computing infrastructure. Powered by Crusoe's DFM and DRO solutions, Crusoe Cloud offers a cloud computing service that lowers the cost and environmental impacts of computing. Optimized for advanced compute-intensive applications like AI, high-performance compute and graphics, Crusoe Cloud meets the innovative computing needs of the future sustainably so we can drive humanity's shared progress.



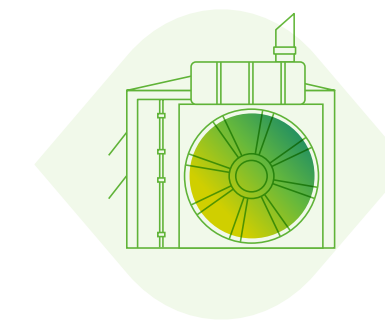
Cryptocurrency Mining

A successful first application for Crusoe's DFM system

Cryptocurrency has several features that made it an ideal application to pilot, test and prove out our DFM systems in the oil fields. Crusoe was able to economically unlock the value of stranded energy sources and cover the costs of developing and deploying our technology to absorb excess waste energy, while securing the bitcoin network in an environmentally positive way.



Capturing Wasted Energy



Digital Flare Mitigation®

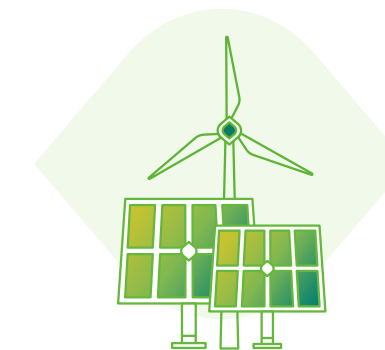
Utilizing wasted flared natural gas in the oil field

Crusoe's Digital Flare Mitigation® (DFM) system is an innovative solution that captures wasted natural gas from the oil field and uses it to power advanced, modular data centers co-located onsite. These systems are deployed to assets where pipeline capacity is limited or unavailable to mitigate the environmental impacts of oil production by reducing flaring and methane emissions.

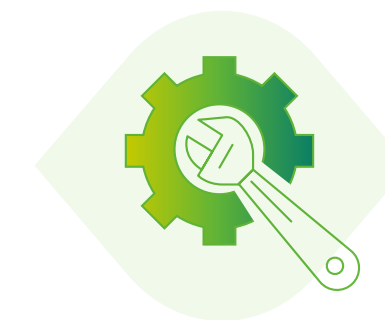
Digital Renewable Optimization™

Utilizing stranded and surplus clean and renewable energy

Crusoe's Digital Renewable Optimization™ (DRO) solution consists of modular, scalable data centers deployed next to renewable and clean energy assets behind-the-meter, reducing the need for long-distance transmission and transmission losses. We contribute to the enablement of the clean energy transition by creating alternative revenue streams for clean and renewable assets and bringing demand to the site of generation.



Vertically Integrated Manufacturing



Crusoe Industries

Manufacturing clean energy and computing products and infrastructure

Crusoe Industries manufactures specialized electrical systems, including modular data centers, metal structures, electrical enclosures, industrial controls and power distribution systems that enable the growth of climate-aligned power sourcing, modular infrastructure systems and digital technologies for Crusoe and clients across a number of industries.



Climate-Aligned Computing

Crusoe’s business creates value from wasted energy through two forms of computing – cloud computing and cryptocurrency mining.

Cloud Computing

Cloud computing is a highly energy-intensive process due to the large volume of data that is processed, stored and generated in data centers by users around the world and around the clock. Data centers require a significant amount of electricity consumption to operate, driven by energy-hungry equipment and the need to cool that equipment. In 2020, data centers accounted for about [1% of global electricity demand](#). The scale of these data centers and the ever-increasing demand for processing power and data storage mean that energy consumption for cloud computing will continue to rise. Looking ahead, cloud computing demand is expected to grow by a [15.8% compound annual growth rate](#). Up to [8% of the global electricity demand in 2030](#) will result from data centers and data transmission network needs. In some countries, researchers project that data centers will make up as much as [15-30% of electricity demand](#) by 2030.

The electricity that powers data centers is most typically sourced from carbon-intensive grid systems that still rely heavily on fossil fuels like coal and natural gas. The cloud computing industry is therefore a significant contributor to greenhouse gas (GHG) emissions that lead to climate change. Global emissions from the data center industry are estimated to contribute somewhere between [2.5% to 3.7% of all global GHG emissions](#), exceeding those from commercial flights (roughly 2.4%). Therefore, cloud computing has an incredibly high carbon footprint and there is a dire need for the industry to transition to sustainable energy sources.

Case Study

Reducing the Environmental Impacts of AI

Together Computing provides a decentralized cloud for artificial intelligence. They recently released [OpenChatKit](#), which utilizes a large language model similar to OpenAI’s GPT-4, focused on conversational interactions including multi-turn dialogue, question answering, classification, extraction and summarization. Together deeply values sustainability and partnered with Crusoe to access compute resources that are carbon reducing. The training of the underlying model was done on Crusoe Cloud, providing Together with a low cost and climate-aligned computing solution.

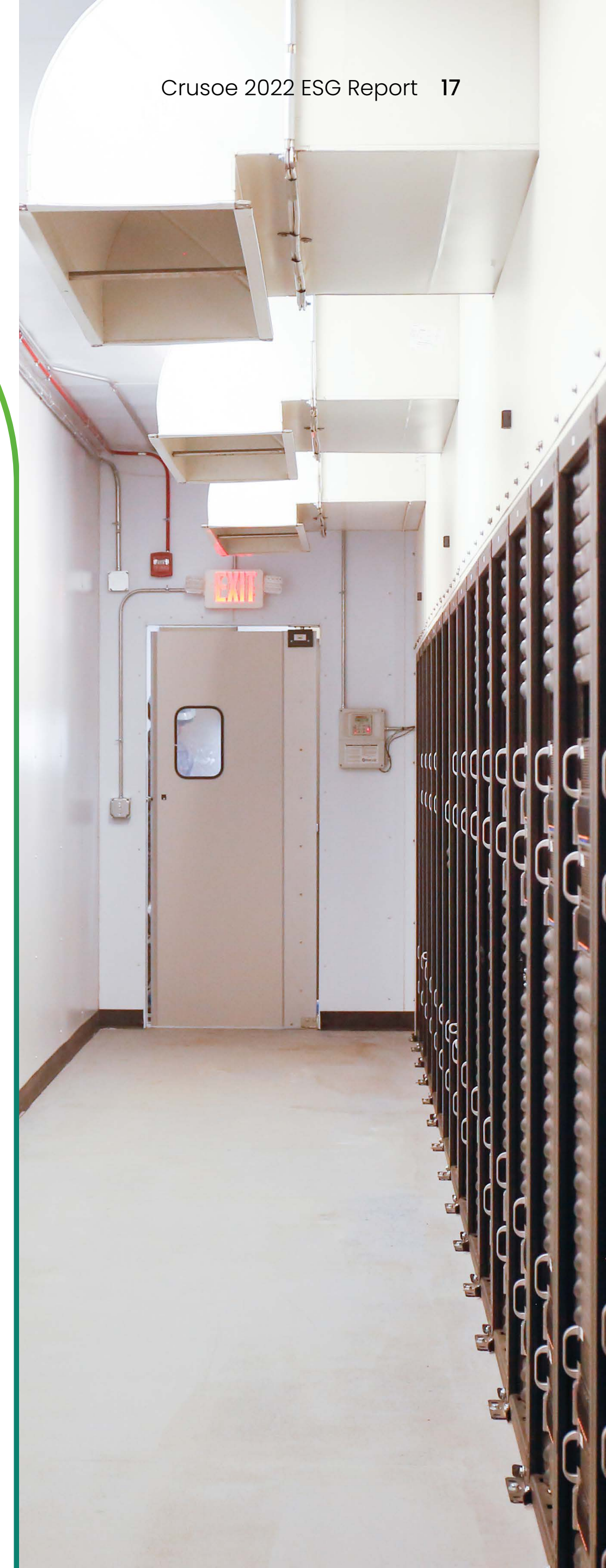
In 2030, up to

8% of global electricity demand

will result from data centers and data transmission networks.



IEA





Climate-Aligned Computing

Built on the energy foundations of our DFM and DRO solutions, Crusoe Cloud is designed to lower both the economic cost and environmental impact of compute-intensive workloads by providing a scalable, climate-aligned and cost-competitive cloud service optimized for AI, high performance compute and graphics. The platform is connected to the internet via a low latency and highly redundant networking system, offering best-in-class performance, availability and price.

The workloads that Crusoe Cloud targets, such as generative AI tasks, are some of the most energy-intensive and environmentally impactful, as well as the fastest growing. Crusoe is proactively building the most climate-aligned compute infrastructure for running these types of workloads, which are at the center of the AI revolution.

Customers routinely use thousands of GPUs while training AI models. The energy cost savings are passed on to customers in the form of lower prices, usually at a 40-50% discount compared to hyperscale cloud providers.

Crusoe is a NVIDIA elite partner, leveraging the latest compute hardware and networking infrastructure to deliver leading edge ML training and inference infrastructure. Crusoe Cloud is powered by NVIDIA's H100, A100, A40 and RTX A6000 GPUs connected via high performance ethernet and InfiniBand networking. This combination of industry-leading GPU and networking infrastructure enables and accelerates the largest parallelized compute workloads that are at the leading edge of AI today. In addition, Crusoe Cloud provides industry standard Service Level Agreements (SLAs) for virtual machine uptime.

Looking ahead, Crusoe Cloud will continue to add additional compute, storage and networking capabilities, including additional NVIDIA hardware, high performance file systems and network peering to on-premises hardware.

Crusoe Cloud is currently in private alpha, with a public launch planned for 2023.

Crusoe Cloud, powered by our DFM and DRO solutions, offers software innovators high-performance computing at a low cost with a lower environmental impact.

MICHAEL MCDONALD
Crusoe Cloud Product Manager

Over the course of the a year, using a Crusoe DFM-powered GPU reduces emissions by approximately 4.4 metric tons.

This is equivalent to the amount of carbon avoided or sequestered by:

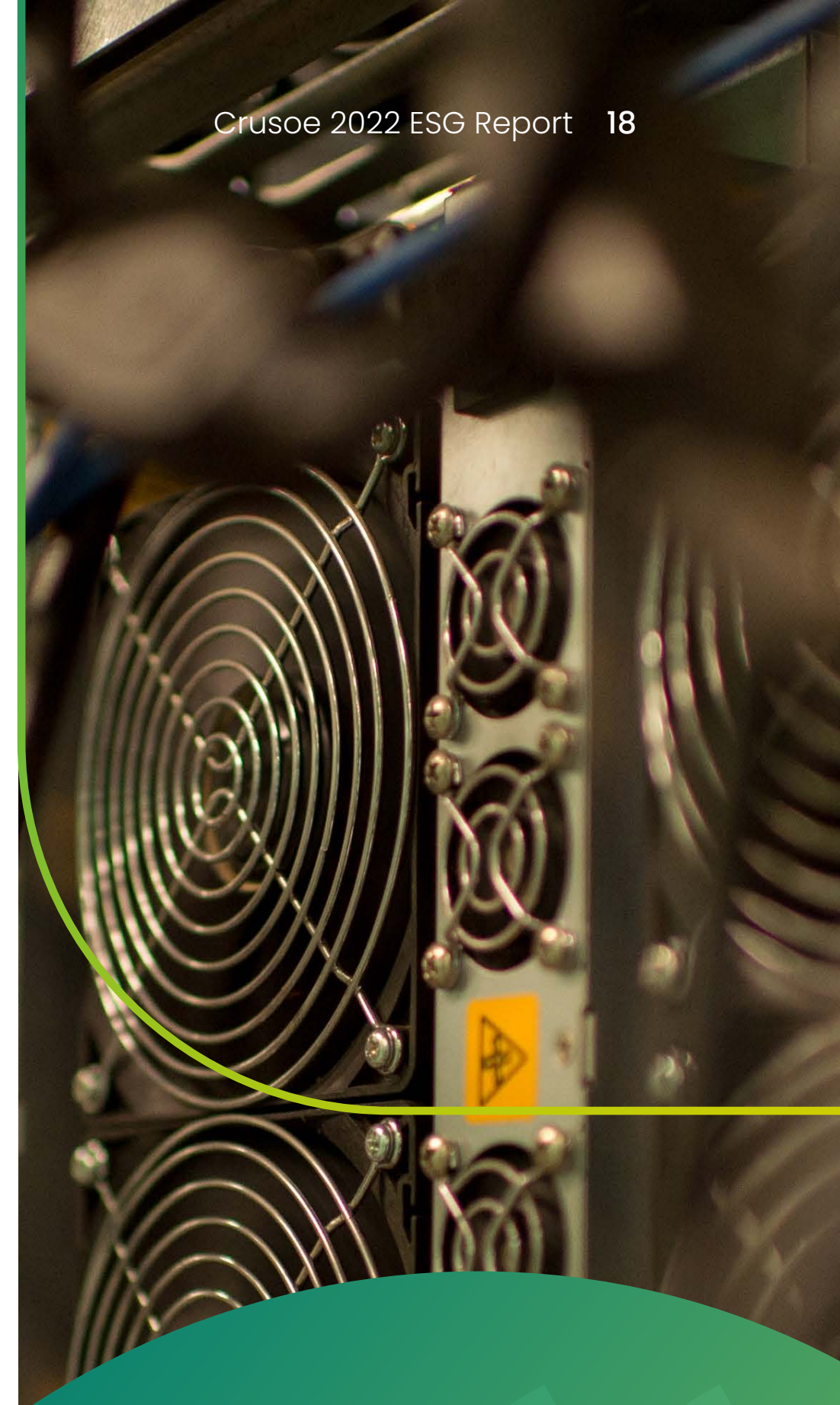
Preserving over 5 acres of forest in the U.S.

Removing 1 gasoline powered car from the road for a year.

Recycling 1.5 tons of waste instead of sending it to landfill.



Based on EPA Greenhouse Gas Equivalencies Calculator.





Climate-Aligned Computing

The first computing application for Crusoe's data centers was cryptocurrency mining. Several features of Bitcoin made it an attractive first use case for our DFM systems and modular data centers.

Cryptocurrency Mining

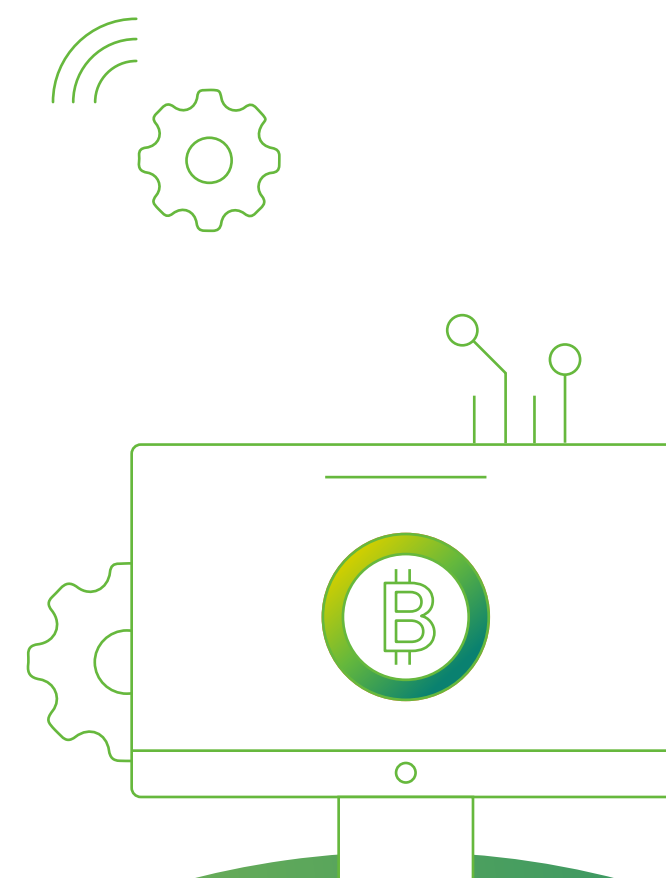
Bitcoin is an open and permissionless network that enables a globally decentralized monetary ecosystem where transactions are secured and validated by a computationally complex consensus mechanism. These computations bring the network security, but also require a lot of energy.

These properties of being energy-intensive while also being open and permissionless to participate, made it a perfect mechanism to rapidly scale a beneficial use to consume the massive amounts of electricity that could be generated from wasted flare gas and improve the environmental performance of both bitcoin and oil production.

Additionally, Bitcoin mining is an interruptible workload, which can be turned on and off at a moment's notice. This allowed us to pilot, test and prove out our model of using flared gas, whose flow could be disrupted, without worrying about the impacts of down time on potential customers. On the renewables side, this feature also enables us to respond to the intermittency of wind and solar energy, utilize excess power when demand from other applications is low and help stabilize the grid.

Lastly, the value of bitcoin made it possible to economically unlock stranded energy resources and cover the costs associated with developing and deploying our technology to absorb excess waste energy, while securing the bitcoin network in an environmentally positive way.

As we scale up Crusoe Cloud to offer a solution that can sustainably power many types of computing tasks, we will continue to operate and scale cryptocurrency mining capacity as it is a particularly effective way to absorb excess and waste energy.





Capturing Wasted Energy

Crusoe's Digital Flare Mitigation® technology is an innovative solution that captures wasted flared natural gas on oil fields and uses it to power advanced, modular computing systems on-site.

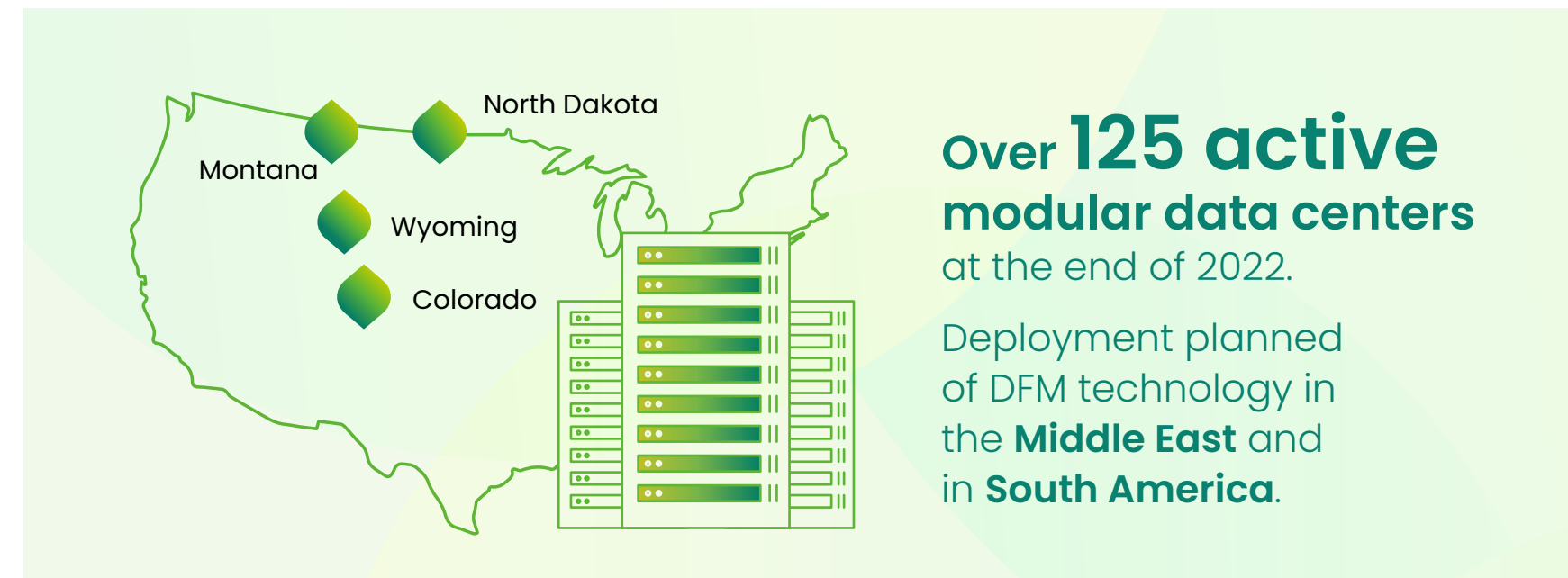
Digital Flare Mitigation® (DFM™)

Pioneered and scaled by Crusoe, our DFM systems are designed to use existing stranded and wasted energy sources in a more environmentally responsible and efficient manner by co-locating mobile data centers on oil well pads. While many operators sell gas into traditional pipelines, Crusoe's DFM solutions are deployed to assets where pipeline capacity is limited or unavailable.

Crusoe manufactures, installs and operates the DFM modules, typically free of charge to the oil producer. These modular systems can be rapidly deployed and are designed for use in rugged, remote oil field environments. By tapping into gas lines onsite, DFM technology uses the captured and otherwise wasted gas to fuel highly-efficient generators that produce electricity to power data centers.

Crusoe operates two types of DFM power platforms: reciprocating engines (2MW units consuming approximately 300,000 cubic feet of rich gas per day) and gas-fired turbines (typically 15MW consuming more than 2 million cubic feet per day). These platforms have been deployed to flare mitigation projects in North Dakota, Montana, Wyoming and Colorado.

Throughout 2022, we significantly expanded our DFM presence in the U.S., with deployed units powering more than 125 modular data centers at the end of 2022. Crusoe will also soon begin operating at a global capacity. In June 2022, we announced the planned deployment of DFM technology in the Middle East to support flare reduction in the region and additional projects are under development in South America.



Many leading oil companies are prioritizing the reduction of both flaring and methane emissions from operations.

As such, the DFM system benefits oil producers and the environment in three ways:

1. Enables flaring reduction and compliance with flaring regulations
2. Reduces methane emissions
3. Provides an incentive for oil companies to reduce flaring and emissions by generating an additional revenue stream for oil producers rather than waste an energy source

Crusoe's technology has been recognized as an innovative application

by the World Bank's flaring mitigation initiative, the Global Gas Flaring Reduction Partnership.





Capturing Wasted Energy

Case Study

Reducing Gas Flaring in Bakken Oil and Gas Wells

In McKenzie County, North Dakota, an oil and gas production company which drills horizontal Bakken oil wells experienced a transportation challenge with its associated gas produced from five oil wells. The issue was due to a lack of capacity in the existing pipeline system. Other sites on the gas-gathering system contributed to overall production, so the excess gas volume fluctuated and was difficult to predict. In addition, the operator was unable to access any utility electricity at the well site. The options for dealing with surplus gas – such as gas-to-liquid conversion, compressing it to natural gas or increasing the pipeline’s capacity – were limited or financially unfeasible. Given these constraints, the regulatory agency granted the operator permission to burn off the extra volumes of gas through flaring.

Crusoe proposed a solution that deployed three DFM modules, which would consume approximately one million standard cubic feet per day (mmscf/d) of the otherwise flared gas for at least twelve months. The pipeline company agreed to waive the gas dedication agreement for that amount, allowing Crusoe to purchase and take possession of gas at the wellhead in lieu of flaring and use the otherwise wasted gas to generate electricity directly on-site for operations. This change in the handling of surplus gas resulted in a decrease of flaring by over 350 mmscf of gas in a year and avoided over 45,000 MTCO₂e of emissions, equivalent to removing nearly 10,000 cars from the road for a year.

Not only was DFM a cost-effective solution for managing excess gas, it also allowed the operator to reap a diverse set of benefits: minimized the environmental impact of flaring, generated power for on-site usage and provided a supplementary source of income through the sale of otherwise wasted gas.



Each one of Crusoe’s 2MW DFM system has the potential to reduce over 13,500 tons of CO₂-equivalent (“CO₂e”, the carbon dioxide equivalent of other greenhouse gasses) emissions annually, comparable to taking approximately 2,900 cars off the road for a year. Decreasing methane levels goes beyond emissions reduction: it also leads to a decrease in ground-level ozone, which is harmful to human health and the environment. Lowering these pollutants can lead to better air quality and a healthier environment.

Each 2MW DFM system has the potential to reduce **>13,500 MTCO₂e** of emissions annually equivalent to removing **~2,900 cars off the road for a year.**





Capturing Wasted Energy

Guided by one of our core values – *relentless commitment to energy efficiency* – Crusoe is extending the digital transformation of wasted and stranded energy beyond traditional energy production and towards clean and renewable energy through our Digital Renewable Optimization™ solution.

Digital Renewable Optimization™ (DRO)

As several U.S. regions have experienced a significant increase in installed renewable capacity over the last decade, generation plant owners struggle to ensure the profitability of their assets. Due to delayed development of the transmission infrastructure required to transport surplus renewable electricity from where it is generated to where it is used, these assets face negative pricing and forced output reduction (curtailment) risks.

Other classes of clean energy assets, such as hydro or nuclear power plants, can be exposed to similar market risks when there is not enough electricity demand around them or transmission capacity to access distant markets.

Just like DFM, the DRO solution consists of modular, scalable data centers deployed next to renewable and clean energy assets. The data centers will be positioned behind-the-meter, i.e., primarily will run with electricity generated directly by the renewable and clean power producing assets.

Crusoe's DRO solution helps rebalance the local transmission infrastructure, reduce transmission losses ([on the order of 5% in the United States](#) and [higher in other regions](#)) between generation and load, and improve the economics of renewable energy assets through creative commercial structures that minimize downside risks (i.e., removing negative price risk)

while still offering upside in scarcity pricing environments (i.e., shutting off interruptible loads when the grid needs the electricity). We contribute to continued operations and to the enablement of a large-scale energy transition by creating alternative revenue streams for renewable assets.

Crusoe is currently working towards the deployment of DRO projects of 10 to 200MW capacity with various clean energy asset owners in the U.S. and Canada.

Beyond Crusoe's core business of flare mitigation, Crusoe's technology and scale has a lot to offer in the way of enhancing renewable energy economics and strengthening the reliability of electrical transmission systems and grids here in the United States and abroad.

STEVE HORN

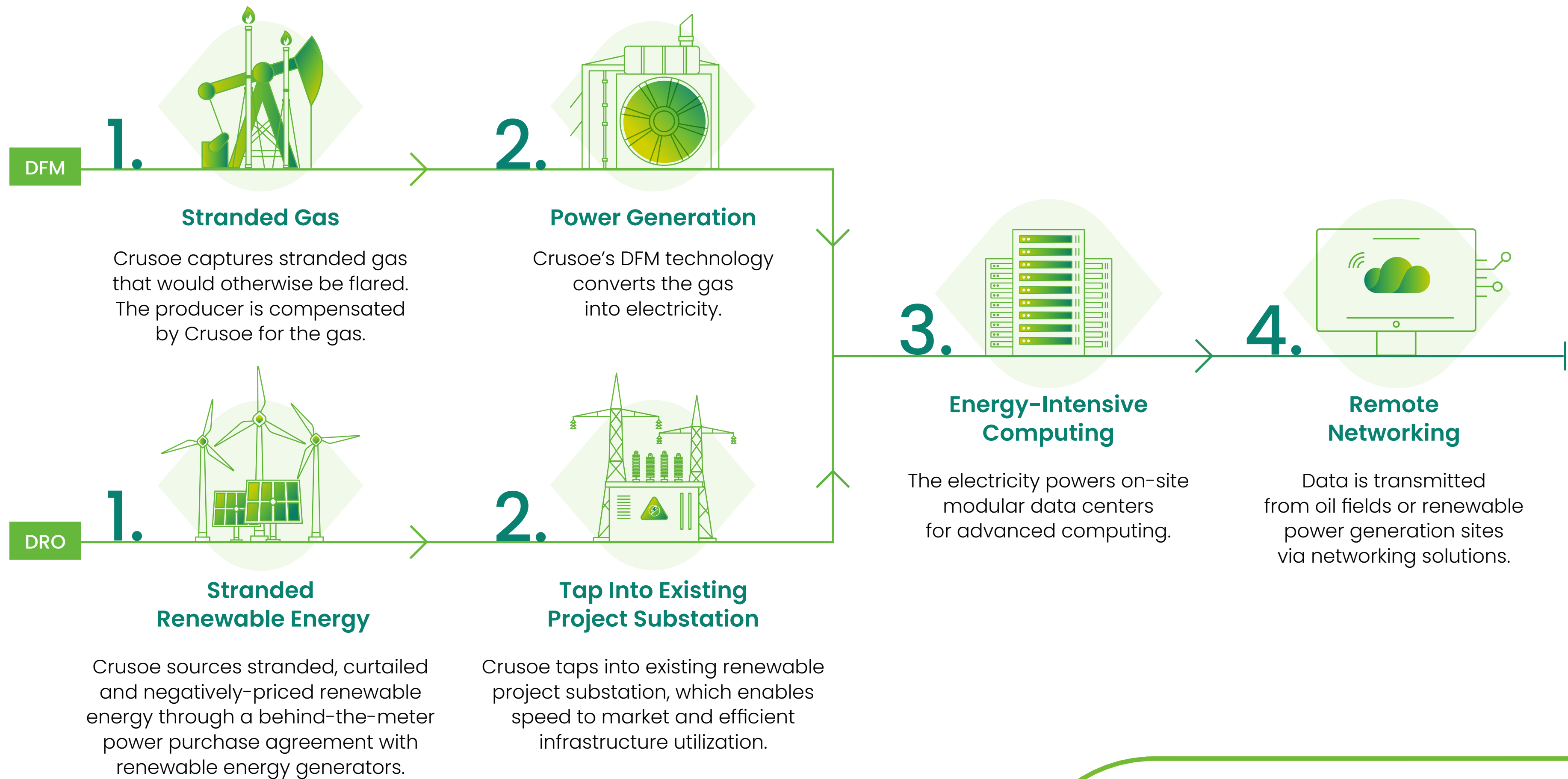
Vice President of Power Engineering and Operations





Capturing Wasted Energy

Crusoe's DFM and DRO systems work in the following way:





Manufacturing for Clean Energy and Computing

On June 21, 2022, Crusoe acquired Easter-Owens Electric Co., a third-generation family business that manufactures specialized electrical systems and modular data centers for a number of industries, and Crusoe Industries was born.

Crusoe Industries

With this acquisition, Crusoe now has an 87,000 square foot manufacturing facility in Arvada, CO, with over 80 employees enabling us to design, quickly prototype and build many of the products and infrastructure that are needed for the clean energy and computing industries. Crusoe Industries' skilled team includes master welders, electricians and engineers with the capabilities and expertise to design and build a range of advanced electrical products and systems.

Crusoe Industries represents an extension of Crusoe's mission of sustainable growth for the digital economy. As data requirements continue to rapidly scale and evolve, we can deliver modular, mission-critical solutions that power the world's expanding digital economy.

By vertically integrating, Crusoe can design, invest in R&D and manufacture our own specialized modular data centers, facilitating the growth of Crusoe's business. Crusoe Industries also manufactures specialized electrical systems, including modular data centers, metal structures, electrical enclosures, industrial controls and power distribution systems that enable the growth of climate-aligned power sourcing, modular infrastructure systems and digital technologies for clients across a number of industries.





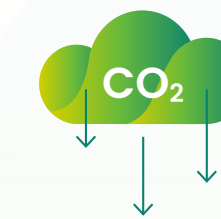
Our ESG Journey



2022 Achievements



Reduced natural gas flaring by over **4 billion cubic feet.**



Avoided **6,400 metric tons of methane emissions**, equivalent to **528,000 metric tons of CO₂e.**



Reduced over **60% more emissions** than we generated in our operations, leading to **net-negative emissions.**

Environmental

Crusoe extends the climate runway by cleaning up the existing energy system while powering advanced computing infrastructure.



Crusoe and the Energy Transition

Crusoe supports the energy transition to carbon-free sources by cleaning up the current energy system and helping to accelerate the development of clean energy technologies.

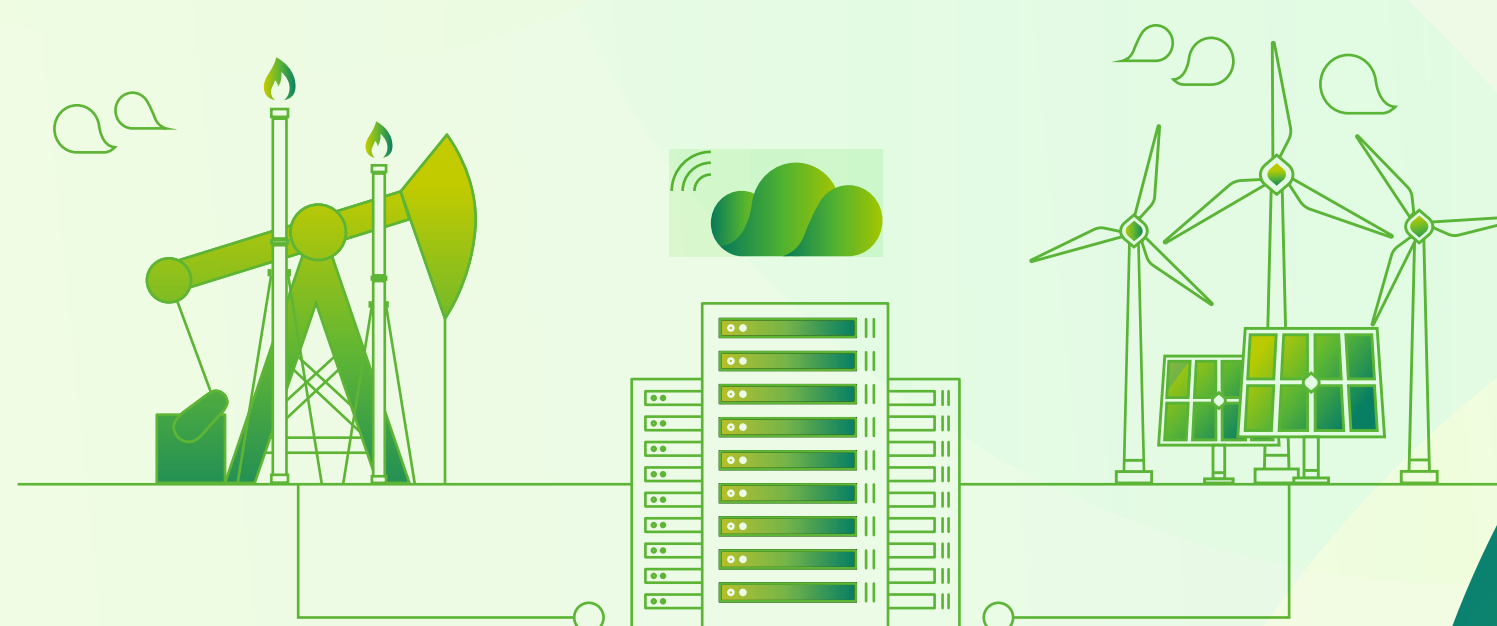
Access to energy is a key input to economic development and rising living standards. Energy powers our homes, businesses, infrastructure, transportation and food systems and it drives our global economy, including rapid advancements in technological innovation. As our world continues to develop and as innovations accelerate, our demand for energy will continue to grow.

To address climate change and build a more sustainable planet, we recognize that the energy transition – away from traditional fossil fuels to carbon-free sources – is an environmental imperative.

Renewables are growing very quickly, but total demand for energy is growing even faster as billions of people around the world come out of poverty. Hence, oil and gas will continue to play a major role in our daily lives during a long-term, multi-decade transition.

Oil is our single largest source of primary energy on a global basis today and the [U.S. Energy Information Administration](#) projects that oil will continue to be humanity's number one source of energy through at least 2050. Our DFM systems enable operators to minimize their negative environmental impacts by reducing flaring and methane emissions during oil production.

Crusoe is taking a leadership role in the energy transition by helping to clean up the existing energy system and supporting the acceleration and build out of the new energy system.



Energy is central to nearly every major challenge and opportunity the world faces today, including poverty eradication, gender equality, adaptation to climate change, food security, health, education, sustainable cities, jobs and transport.

**UNITED NATIONS HIGH-LEVEL
POLITICAL FORUM ON SUSTAINABLE
DEVELOPMENT (HLPF)**





Curbing Methane Emissions

Methane emissions need to be urgently addressed at the global level. Crusoe’s DFM technology provides operators with a cost-effective solution to reduce methane emissions resulting from natural gas flaring during oil production.

Routine Flaring

Crusoe’s DFM technology repurposes flared natural gas, which is released as a byproduct during oil production, into a useful source of energy for electricity generation.



A significant share of the natural gas extracted from oil fields has historically been, and continues to be, combusted in a controlled process called “flaring”. Flaring was developed primarily out of safety reasons, as it prevents the accumulation of combustible gasses that can trigger explosions or fire, but its global expansion as a practice is explained by the lower marginal market value of natural gas compared to that of oil. Routine flaring of natural gas is particularly common in oil extraction at locations that do not have gas transportation infrastructure – such as pipelines, gas processing plants, compressor stations and related systems – in place to get the gas to market. Consequently, it is cheaper and safer to simply flare the gas.

Flaring not only represents the waste of a valuable and finite natural energy resource, but is also a critical issue for climate change. During the flaring process, not all hydrocarbons are completely combusted into carbon dioxide and a substantial amount escapes in the atmosphere in the form of methane.

Reducing routine flaring globally is an urgent task to mitigate climate change.

The World Bank’s Gas Flaring Tracker Report estimates that over

5 trillion cubic feet

(144 billion cubic meters) of natural gas were flared in 2021, corresponding to almost **two-thirds of the European Union’s net-electricity generation.**

[World Bank’s Gas Flaring Tracker Report](#)

In the U.S. alone, nearly

287 billion cubic feet

(8.1 billion cubic meters) of natural gas were flared or vented in 2021.

[EIA](#)





Curbing Methane Emissions

Curbing methane emissions has the potential to slow the rate of global warming quickly and effectively. Thus, reducing routine flaring on oil fields is key to mitigating the oil industry’s impact on climate change.

In discussions about climate change, the focus has been on carbon dioxide, which is the most common GHG resulting from human activities. In recent years, however, growing attention has been given to other gasses, in particular super climate pollutants that are short-lived but have a significant negative impact on both the environment and human health, such as methane.

Methane is less common than carbon dioxide but has a much stronger impact on climate change.

Methane’s 20-year global warming potential is...

82.5x higher
than carbon dioxide.

UN Intergovernmental Panel on Climate Change (IPCC)

In addition to its climate impacts, methane affects air quality and human health by contributing to the formation of harmful air pollutants such as ground-level ozone.

The [IEA](#) estimates that a third of global methane emissions result from the production and transportation of fuels, resulting in the release of approximately 135 million metric tons of methane in 2021.

A portion of it originates from natural gas flaring; according to various recent studies, between 2% and 30% of the methane in natural gas is not combusted during flaring and escapes directly as leakage called “fugitive emissions”.

The production and transportation of fuels resulted in...

~135 million metric tons of methane in 2021.

(1/3 of total global methane emissions)

IEA

In the U.S., an average 9% of the gas sent to flares leaks into the atmosphere instead of being combusted. The methane content in the leaked gas causes three times more global warming than the 91% that gets combusted into carbon dioxide.

However, methane has a significantly shorter lifespan than carbon dioxide, staying in the atmosphere for 12 to 15 years as opposed to hundreds of years for carbon dioxide. Therefore, curbing methane emissions in the short term has the potential to slow the rate of global warming quickly and effectively.

Recognizing this opportunity, various consortiums in the oil and gas industry, such as the [Global Methane Initiative](#) and the [World Bank’s Zero Routine Flaring by 2030](#), advance joint public and private efforts to abate methane emissions from natural gas flaring. Many other public organizations are actively working under the framework of the [Global Methane Pledge](#), which was launched in November 2021 at the UN Climate Change Conference COP 26 and drives collective action to reduce global methane emissions by at least 30% by 2030 compared to 2020 levels.





Curbing Methane Emissions

Environmental Benefits of Crusoe's DFM Technology

Crusoe's DFM technology converts the natural gas captured at oil wells and converts it into electricity by leveraging a stoichiometric combustion process, which allows reaching a 99.9% methane combustion efficiency. This compares to an average flare combustion efficiency of 91.1%, as established by a recent [University of Michigan study](#).

In 2022, Crusoe captured over 4 billion cubic feet of gas, which led to the avoidance of approximately 509,000 metric tons of CO₂e emissions. We hope to exceed more than 1 million metric tons of lifetime avoided CO₂e emissions in the next year.

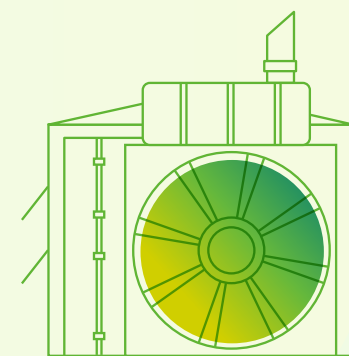
The Biden administration has made methane reduction one of its top environmental priorities. The U.S. Federal Environmental Protection Agency (EPA) [has proposed a new rule to stop routine flaring](#) and the Inflation Reduction Act's (IRA) Methane Emissions Reduction Program introduced a fee on excess methane emitted by oil and gas companies who report emissions under the Clean Air Act. Crusoe advances these goals and helps operators comply with these regulations.

Combustion Efficiency

Routine flaring
91.1%



Crusoe
99.9%



Crusoe's DFM technology also greatly decreases the emission of air pollutants, with reductions of up to:



99%
Methane



69%
CO₂e



95%
CO



74%
NOx



99%
VOCs

Based on 20-year GWP for methane, gas composition with 93% methane and average flaring combustion efficiency of 91.1% based on latest research from University of Michigan (Plant, et.al, Science, Sept 29, 2022).





Managing Our Emissions

We are committed to measuring and reducing our GHG footprint, as well as to advancing the crucial concept of avoided emissions.

Crusoe's GHG Footprint

Crusoe started measuring and reporting our GHG footprint in 2021. With the support of [Emitwise](#), a third-party carbon accounting platform, Crusoe follows best practices set by the [GHG Protocol's Corporate Accounting and Reporting Standard](#) (Corporate Standard) to measure, track and manage the GHG emissions resulting from our business activities and our value chain.

For the majority of our GHG footprint, Crusoe and Emitwise used quantity data to calculate our emissions. We used spend data when quantity data was not available. Emitwise modelled a small number of activities, such as waste, office energy use, and employee commuting and remote work, when quantity data was not available. We utilized the most appropriate emissions factor published by organizations including UK BEIS and DEFRA, US EPA, Exiobase and Ecoinvent, based on the activity type.

2022 GHG Emissions

In 2022, Crusoe's boundaries changed with the acquisition of Easter-Owens Electric Co. (now Crusoe Industries) in June 2022 and Great American Mining in October 2022. These acquisitions did not add a material amount to Crusoe's overall emissions.

Crusoe's DFM operations scaled significantly in 2022. We utilized over 4 billion cubic feet of natural gas, more than double the volume in 2021. Reflective of Crusoe's business model of harnessing wasted flared gas to generate the electricity that powers our modular data centers, Crusoe's Scope 1 emissions (direct emissions from fuel consumption) and Scope 3 Category 3 emissions

(fuel and energy-related activities) are the highest, totaling to more than 85% of Crusoe's GHG footprint.


At Crusoe, we act to reduce our GHG footprint wherever possible.

2022 was the second year in which we purchased and retired high-quality, Green-e certified renewable energy certificates (RECs) to address 100% of our Scope 2 emissions associated with electricity purchased from the grid for our offices, warehouses and operations. The RECs correspond to renewable electricity generated by wind turbines in the U.S. in the first half of 2022. Accounting for these RECs, Crusoe's market-based Scope 2 emissions are zero. In addition to purchasing RECs, we also initiated a LED lighting retrofit project in our manufacturing facility at Crusoe Industries in late 2022. Once completed, it will result in higher energy efficiency, decreased energy costs and lower emissions.

Crusoe purchased **Green-e certified wind RECs** for

100% of our grid electricity use

bringing our Scope 2 market-based emissions to **0**.






Managing Our Emissions

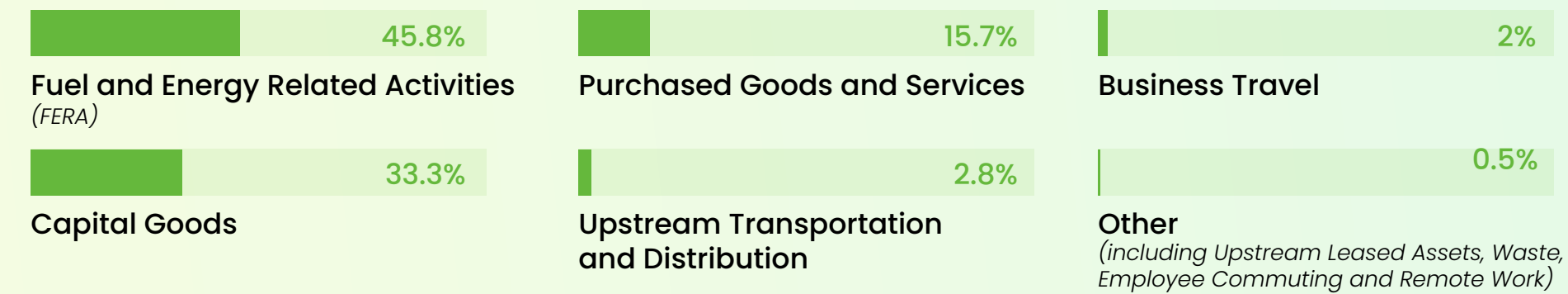
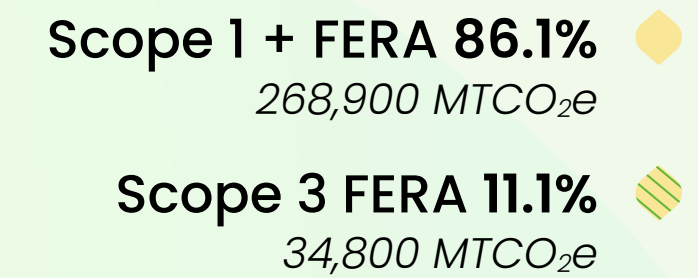
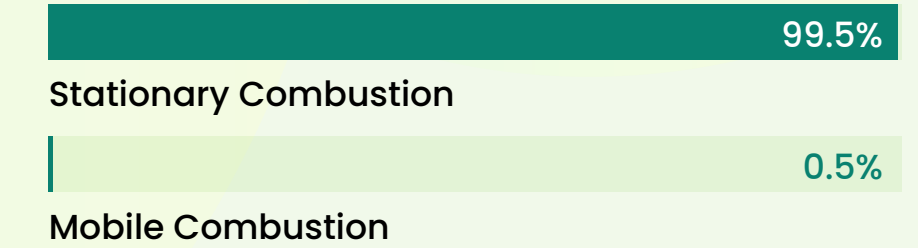
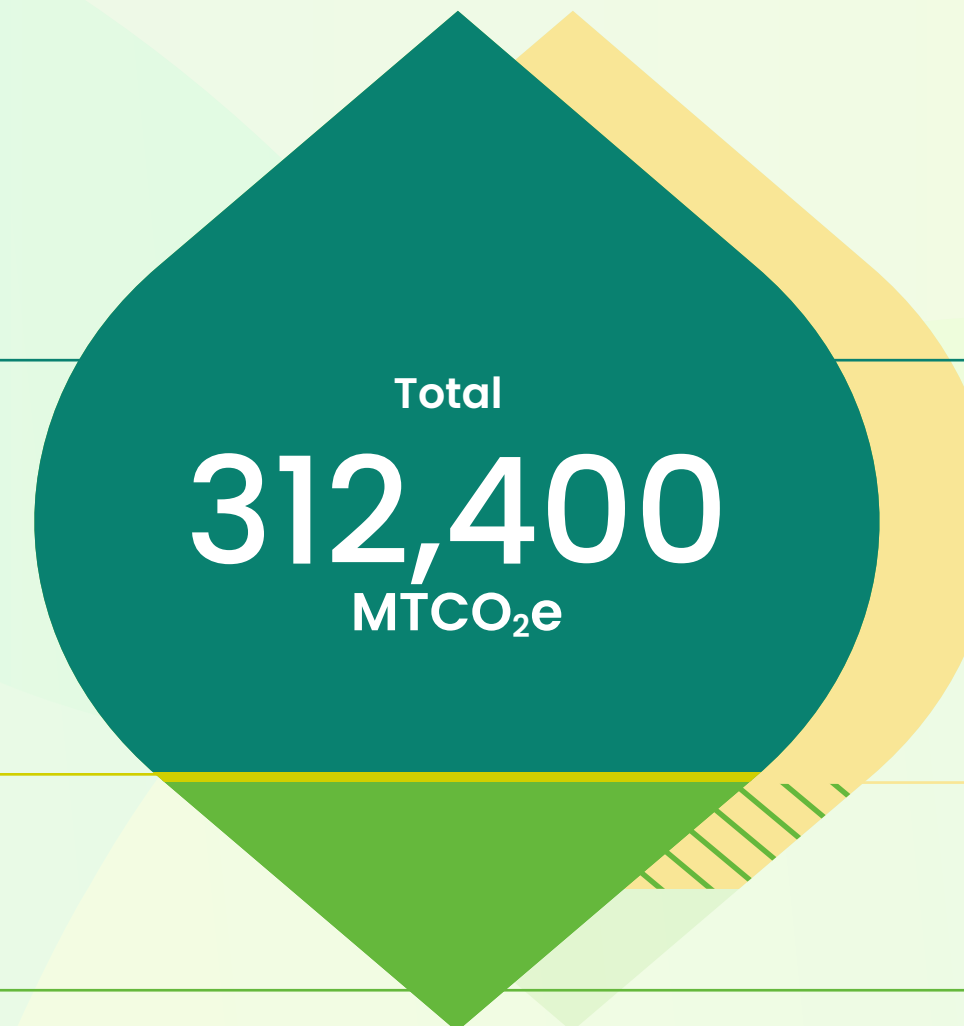
Crusoe's GHG Footprint (MTCO₂e)

	2021	2022
Scope 1	96,500	234,100
Stationary Combustion	96,400	232,900
Mobile Combustion	100	1,200
Scope 2 (Market-Based excl. RECs)	800	2,300
Scope 2 (Location-Based)	1,300	2,700
Scope 2 (Market-Based incl. RECs)*	0	0
Scope 3	32,000	76,000
Fuel and Energy Related Activities (FERA)	14,700	34,800
Capital Goods	11,000	25,300
Purchased Goods and Services	2,600	11,900
Upstream Transportation & Distribution	3,000	2,100
Business Travel	400	1,500
Other	300	400
Total	129,300	312,400

*Crusoe purchased RECs for 100% of the electricity it purchased from the grid.

2022 GHG Emissions Breakdown

- Scope 1**
74.9%
234,100 MTCO₂e
- Scope 2 (Market-based)**
0.7%
2,300 MTCO₂e
- Scope 3**
24.3%
76,000 MTCO₂e





Managing Our Emissions

Crusoe calls for the creation of a standardized framework to measure avoided emissions.

Emissions Avoided by Crusoe: Scope 4

While the GHG Protocol creates a global standardized framework for measuring and managing greenhouse gas emissions, it doesn't tell the whole story of a company's emissions impact. That's why we also calculated our "avoided emissions" to understand our full impact on the climate.

As the world races to mitigate climate change, public and private organizations around the globe are developing innovative clean technologies to reduce and even remove, GHG emissions. These efforts are critical to keep the world on the path to meet the Paris Agreement's goal of limiting global warming to no more than 1.5°C above pre-industrial levels.

The ultimate goal of emissions accounting is to understand the real impacts that companies have on the planet. Accordingly, this accounting should include not just what companies are contributing to global emissions, but also what companies are reducing or avoiding through the use of their products and services. Calculating "avoided emissions", sometimes referred to as "Scope 4", helps address a gap in the GHG Protocol by painting a more complete picture of companies' positive and negative GHG impacts.

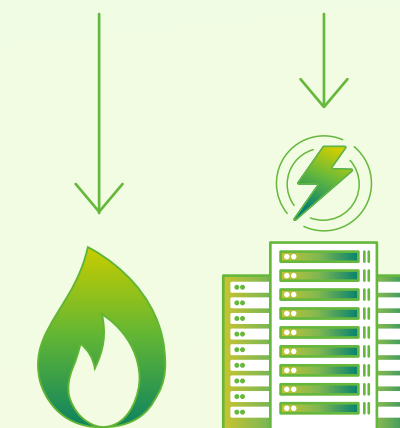
Crusoe is among the growing number of stakeholders calling for the creation of a standardized framework that guides companies to measure and report avoided emissions or emissions reduction. We believe that updating the GHG Protocol to incorporate Scope 4 will help companies develop a more complete understanding of their environmental footprint and impact, and incentivize and reward those that develop cleaner technologies, products and services.

To calculate our avoided emissions, we compared the emissions from using

our DFM systems to the emissions that would have resulted from flaring that natural gas in our absence. We used formulas from the U.S. Environmental Protection Agency to calculate the emissions from our generators – which have a regularly measured and confirmed combustion efficiency of 99.9% – and the emissions that would have been generated by open flares – which the latest research from the [University of Michigan](#) found were on average only 91.1% efficient.

Crusoe avoids emissions in two ways:

1. By **reducing flaring** and the associated methane emissions.
2. By **reducing the need for purchased electricity** to power our data centers and the associated grid emissions.



Based on this comparison, we estimated that had the natural gas we used in our DFM systems been flared in our absence, it would have resulted in approximately 6,400 metric tons more methane escaping into the atmosphere. As methane is a short-lived greenhouse gas that has 82.5 times the global warming potential of carbon over a 20-year period, this translates to an equivalent of nearly 509,000 MTCO₂e emissions avoided after netting the emissions from running our DFM systems.

GHG emissions impact of a product relative to the situation where the product does not exist.

FINKBEINER AND BACH 2021



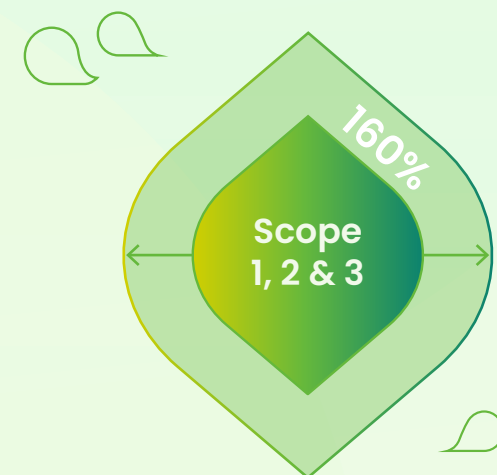


Managing Our Emissions

By preventing flaring, Crusoe reduced more emissions than we generate across all of our business activities.

Our operations eliminated over

160% of our Scopes 1, 2 and 3 combined, resulting in a net reduction in greenhouse gas emissions of nearly **200,000 MTCO₂e.**



Crusoe’s strategy is to use wasted and stranded energy to minimize energy waste and to minimize our use of grid power. In 2022, Crusoe generated the majority of the electricity we used through our DFM technology – over 500,000 MWhs – thus minimizing the need to draw electricity from the U.S. electricity grid. This enabled us to avoid the creation of an additional approximately 200,000 MTCO₂e of emissions that would have resulted from those same computers drawing grid power. Crusoe has previously sold some carbon credits based on our ability to displace grid emissions.

Crusoe will continue to use our DFM and DRO technologies as our primary sources of power for our infrastructure and limit our use of grid power to when DFM and DRO sites are not available or as backup.

Carbon Credits

One mechanism that Crusoe has leveraged to demonstrate our emissions impacts is through obtaining carbon credits.

Carbon credits (also known as carbon offsets) are tradable certificates that are issued by recognized carbon registries for each ton of CO₂e emissions reduced or avoided by an eligible project and confirmed by a third party following a rigorous validation and verification process.

In November 2022, a multi-site DFM project deployed by Crusoe in Montana received [Upstream Emission Reductions](#) (UER) certificates, approved by the German Federal Environmental Agency (Umweltbundesamt). UER certificates enable sellers of liquid fuels to meet a portion of their obligation to reduce upstream GHG emissions associated with the production of those fuels under the EU Fuel Quality Directive and German regulation. Crusoe used a methodology developed under the United Nations’ Clean Development Mechanism (UN CDM) program, which sets stringent validation and verification criteria for demonstrating avoided emissions. These certificates were purchased by an operator to meet their regulatory requirements.

In December 2022, Verra, which manages the world’s leading voluntary carbon markets program, the [Verified Carbon Standard](#) (VCS) program, confirmed that repurposing flared gas for electricity generation could qualify for carbon credits under the VCS program. This recognizes that projects using wasted flared gas to generate power reduces GHG emissions and is beneficial, and hence, are eligible to receive carbon credits. Crusoe plans to follow rigorous methodologies and standards to pursue Verra carbon credits for our eligible projects.



Complying with Environmental Regulations

Crusoe complies with all relevant permitting requirements and compliance obligations in our operational locations and aims to minimize our overall environmental impact.

Air Permits

Crusoe's operations in the field are subject to multiple federal and state permits and regulations. Crusoe obtains all necessary environmental permits and maintains operations in full compliance with the requirements established by these permits. Specifically, air emissions are monitored, tested and reported in compliance with various performance standards established by the U.S. EPA, such as the standards for new stationary sources and hazardous air pollutants, and equivalent agencies at the state level.

Additional land usage and wildlife perturbation is minimized because Crusoe typically co-locates data centers on the existing oil well pads where there is active flaring. Furthermore, the majority of our data centers are air-cooled, which avoids the use of groundwater and chemical refrigerants.

Manufacturing Waste

In our manufacturing facility at Crusoe Industries, Crusoe manages separate streams for non-hazardous waste types (scrap metal, oil, cardboard, pallets and general landfill). Scrap metal is collected, sorted and recycled. We are investigating ways to reduce waste by optimizing materials procurement and improving the share of materials that are recycled. We also produce a very small quantity of hazardous paint waste, which is properly disposed of through a specialized waste management company.



2022 Achievements



Received national and local **recognitions for the company's culture, diversity and leadership.**



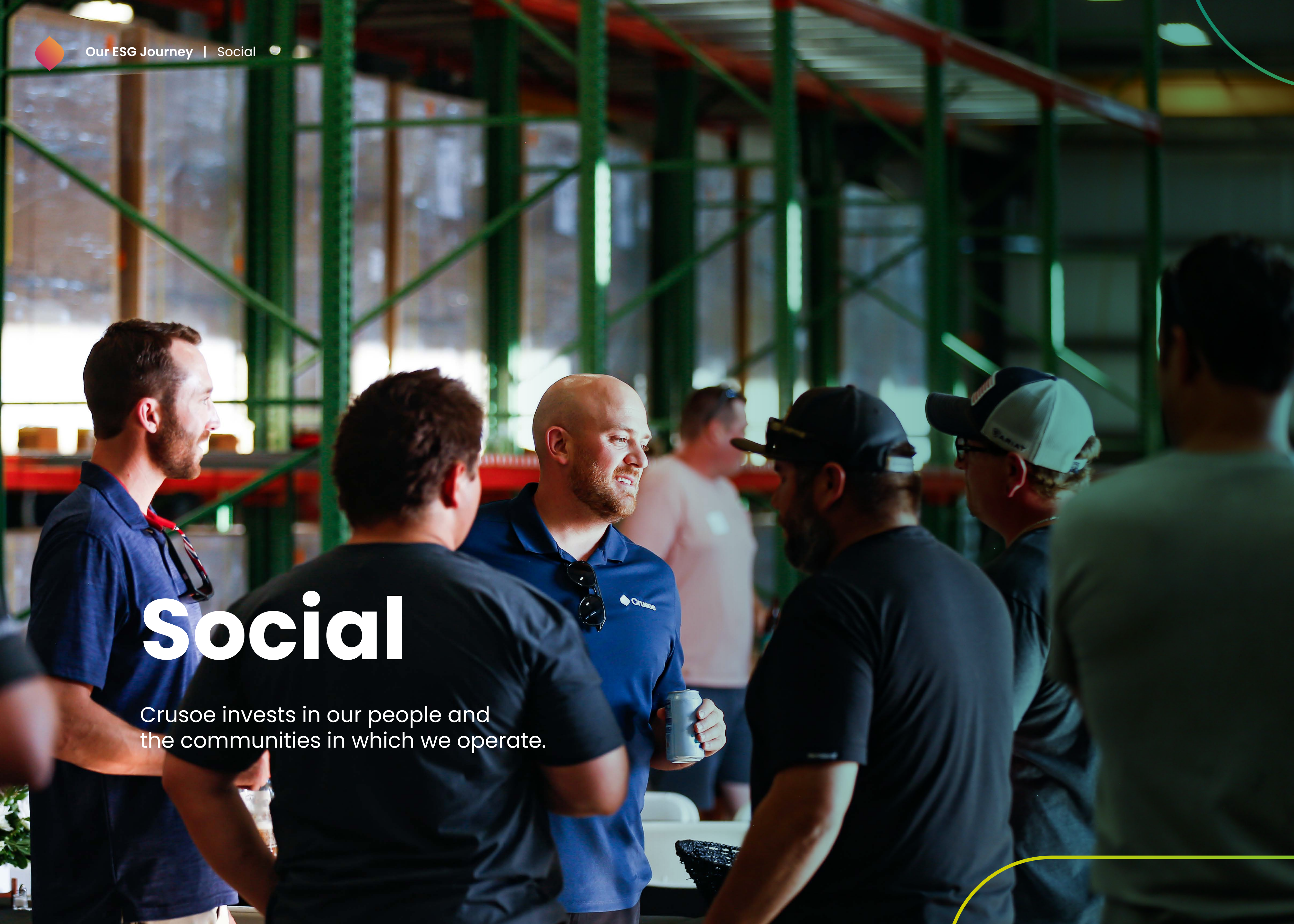
Achieved **650,000 man-hours** without a recordable injury to an employee or contractor over two years.



Brought the **CSforALL Accelerator Program** to the **Denver Public Schools** system.

Social

Crusoe invests in our people and the communities in which we operate.



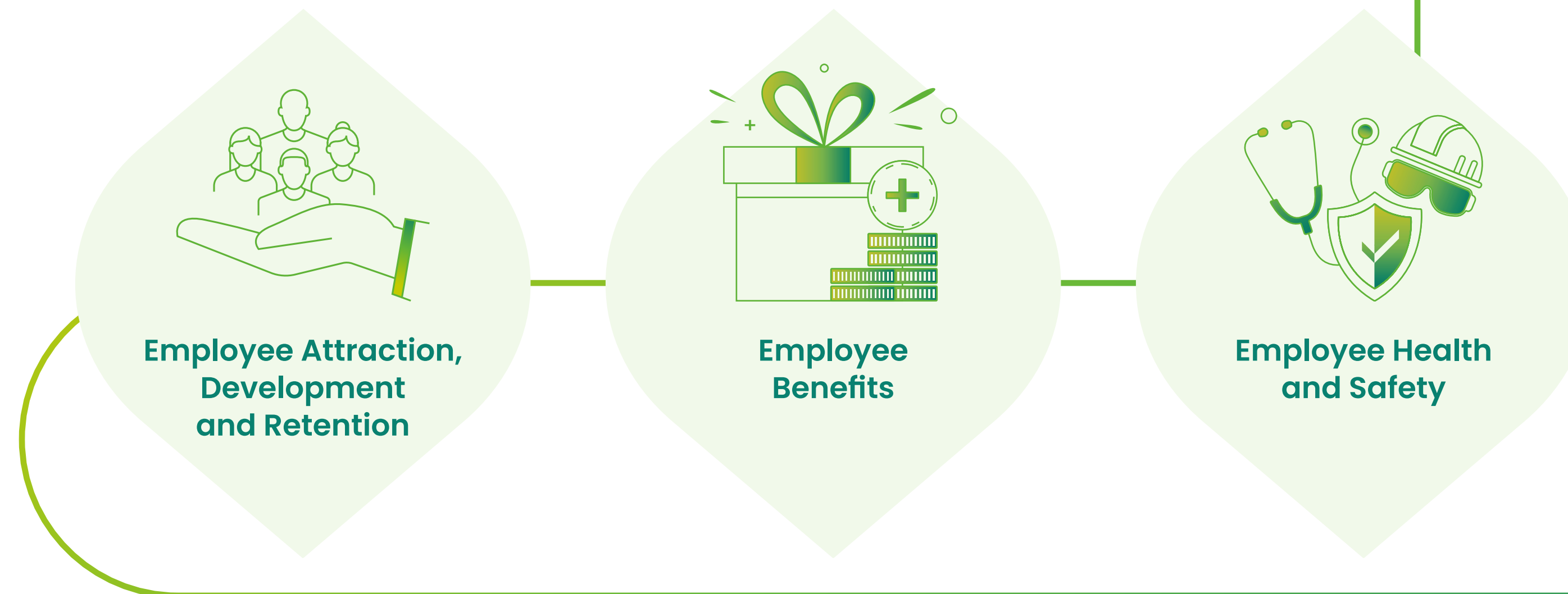


Caring for Our People

Our talented workforce is a key driver of our success. We care deeply about our employees and prioritize their wellbeing, benefits, safety and development.

Building a best-in-class team requires strong foundations. Crusoe's unique positioning at the intersection of climate technology, advanced computing, renewable energy, manufacturing and oil and gas industries requires us to attract, grow, develop and retain a diversified, multifaceted team made up of individuals with a broad range of skill sets and experience.

To achieve this, Crusoe established a people strategy based on three dimensions:





Caring for Our People

Employee Attraction, Development and Retention

Crusoe’s business grew rapidly in 2022 and our workforce more than doubled to nearly 300 employees to keep pace.

Tapping into the collective genius is at the forefront of Crusoe’s employee attraction and retention strategy. Our greatest strength is our diversified team, as our collective knowledge and capabilities are stronger when fueled by a diverse set of experiences and expertise.

Crusoe’s employees represent all genres of workforce – from skilled electricians, fabricators, mechanics and technicians to engineers, accountants, managers and software developers. The interaction and cross-functional collaboration between staff in these roles is a central part of *cultivating an idea meritocracy* and unlocking value.



Crusoe will continue to grow by focusing on three major business initiatives in the upcoming year:



1. The launch and scaling of Crusoe Cloud.



2. The domestic and international expansion of our DFM business.



3. The deployment of DRO projects.



To support our efforts, we expect to add approximately

100 new employees

to the team in 2023.

We have been able to attract and retain highly talented people because we’ve built a company and culture grounded in our values and inspired by our mission and commitment to innovation.

TARA GREEN
Chief People Officer



Caring for Our People

At Crusoe, we provide opportunities for growth and development and encourage our employees to *be and become their best selves* through continuous learning.

Team members who wish to upscale their skills, increase their knowledge and reach new heights have leadership and management’s full support. Crusoe provides on-the-job training and access to learning and development programs, including a tuition reimbursement program. Employees can take advantage of these programs to pursue higher degrees or specialized training and certifications. Furthermore, we encourage qualified internal candidates to apply when open positions become available.

Crusoe is committed to excellent people leadership and is currently embarking on a multi-year training journey that focuses on building the capabilities of our people managers and enabling them to be exceptional leaders and coaches at all levels of our organization. Our goal is to provide our people managers with the tools and support necessary to develop pragmatic, critical skills that materially raise the capability, engagement and success of their team members.

Crusoe has a biannual “Best Self” performance review process in place to facilitate regular alignment on development, as well as continuous individual – and collective – learning and improvement across the organization. Crusoe uses an online performance management platform called 15Five to manage our review process. In addition to regular in-person meetings, we also use the 15Five platform to conduct weekly check-ins between manager and employees to monitor our employees’ sentiments at work and identify potential issues so they can be proactively addressed.

Crusoe has received several best place to work awards in 2022

TOP WORK PLACES 2022
THE DENVER POST

#1
Small Company to Work for in Colorado

1
THE DENVER POST

COMPARABLY

2022 Best Company PERKS & BENEFITS	2022 Best Company HAPPINESS	2022 Best Company LEADERSHIP	2022 Best Company CAREER GROWTH
2022 Best Company for DIVERSITY	2022 Best Company CULTURE	2022 Best Company for WOMEN	2022 Best CEO





Caring for Our People

Diversity at Crusoe

Crusoe operates in several traditionally white and male-dominated sectors but we have made diversity a focus of our hiring and retention and are proud of the unique and multifaceted team we have built.

Crusoe's company culture and values, grounded in mutual respect, collective knowledge and tapping into the strength of our peers, help to unify employees from diverse backgrounds (gender, ethnicity, age, skills) and provide them with a safe workplace that they can thrive in. Our workforce brings unique perspectives, ideas and skill sets gleaned from diverse backgrounds and wide-ranging experiences. Employees span four different generations and range in age from 20 to 75, with college interns working alongside seasoned industry veterans from numerous sectors.

On average, our workforce has more gender and ethnic diversity than the sectors and geographies in which we operate.

Crusoe is an Equal Opportunity Employer and adheres to all relevant state and federal employment laws. We do not discriminate against any employees or candidates in our hiring, compensation, promotion or training. Diverse talent represents diversity of thought, which in turn results in a strengthened company structure with increased innovation and problem-solving. One of Crusoe's core values, *tap into the collective genius*, recognizes the importance of drawing from a diverse set of experiences and expertise.

We know there is more work to be done to build a diverse and inclusive workforce. Crusoe works with third parties to facilitate the recruitment of diverse candidates. We also have active campus recruiting programs to provide internship opportunities and hire new graduates into software and tech engineering roles. We will continue expanding upon efforts that build a workplace that allows our employees to bring their authentic self to work.



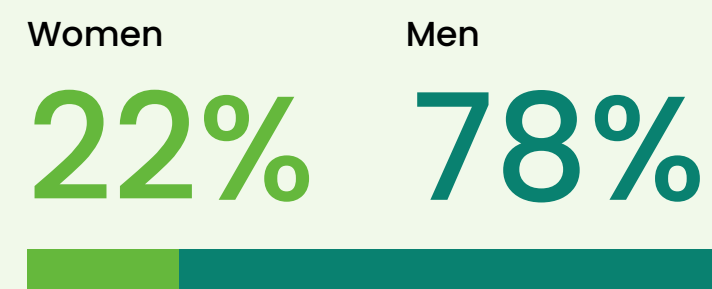


Caring for Our People

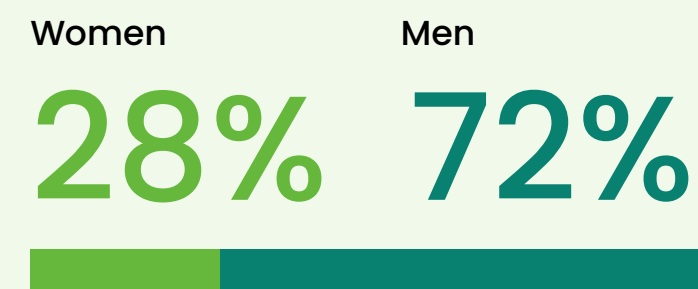
Diversity Metrics

By Gender

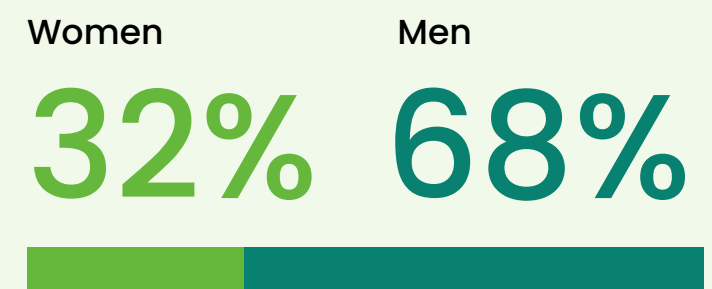
Company-wide*



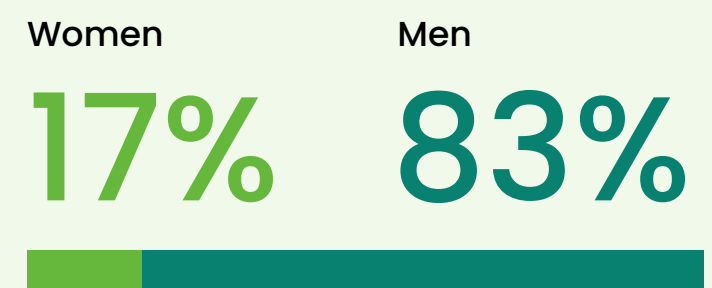
Managers and Above



Corporate Staff



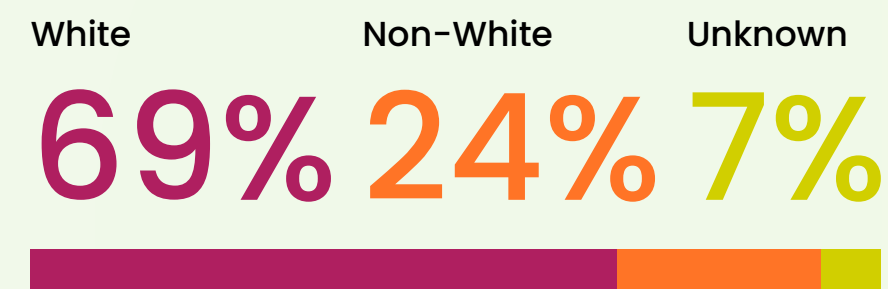
Manufacturing & Field Staff



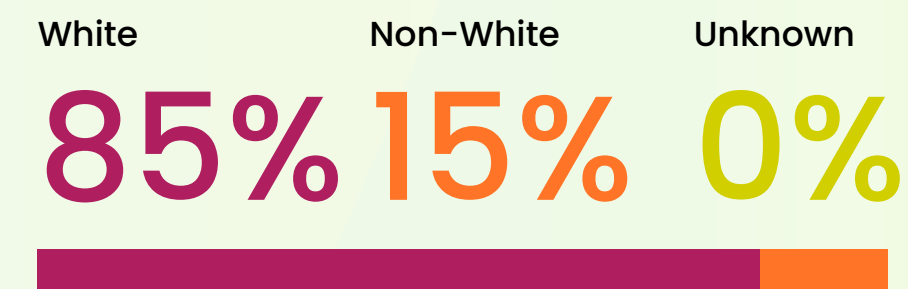
* vs. 24% Women in Oil & Gas and 25% Women in High Tech.

By Race and Ethnicity

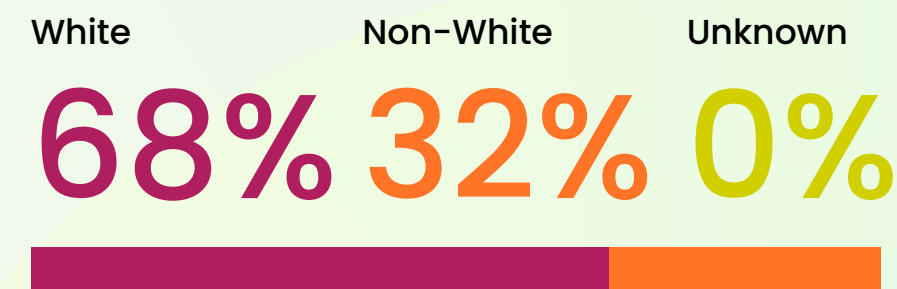
Company-wide*



Managers and Above



Corporate Staff



Manufacturing & Field Staff



* vs. 83% White in Oil & Gas and 62% White in High Tech.

By Generation



Baby Boomers (1946-1964)

9%

Generation X (1965-1980)

26%

Millennials (1981-1996)

52%

Generation Z (1997-2012)

13%



Caring for Our People

Employee Benefits

Crusoe provides our employees with a comprehensive package of benefits – from healthcare and wellness to dependent care, insurance and retirement planning.

We want to support our employees in all areas of their lives and we consider benefits to be an important component of our compensation package. The physical, mental and financial health and wellbeing of our employees are priorities for Crusoe. Our resources, programs and packages foster health, wellness, family support, financial security, and professional development at work and outside of work, which allow for a well-rounded and productive workforce.

Full-time employees scheduled for 30 or more hours per week are eligible to participate in our benefit program. The benefits offered are designed to provide comprehensive coverage for employees and their eligible dependents. We provide our employees with a benefit guide, which highlights the many offerings available and we encourage them to evaluate the options and select those that best suit their personal and family needs.

Some of the benefits we offer include:

Competitive Remuneration

We routinely benchmark the cash compensation of our positions and strive to keep current with competitive total compensation packages for our employees.

Equity Participation

We know all our employees are invested in the success of the company, so we offer equity in the form of stock options and/or restricted stock units to all of our employees, across all levels and populations, so they can share in the success that we collectively create together.

Hybrid Workplace

We offer eligible employees a flexible, hybrid workplace. Employees are in-office a minimum of three days a week unless their role is in the field or in manufacturing and requires in-person work full-time.

Health Coverage

- Medical, dental and vision plans that include prescription, fertility and telehealth benefits.
- Parental leave.
- Wellness benefits including the Calm app.
- Health Savings Account (HSA) or Flexible Spending Account (FSA).
- Medical benefit enhancements such as emergency travel assistance and dispatch health.

Insurance

- Basic life and accidental death and dismemberment (AD&D) insurance.
- Disability insurance.
- Identity theft protection.
- Pet Insurance.

Additional Benefits

- Paid leave (vacation, sick days and bereavement).
- Commuter and transit benefit.
- Tuition reimbursement.
- Cell phone benefit.
- 401K with a 4% employer match.



Caring for Our People

Employee Health and Safety

Safety is intrinsic to how we operate at Crusoe. ‘Safety first, second and third’ is one of the key practices under our *think like a mountaineer* core value.

Employee safety in the workplace is essential at Crusoe and we have established programs and controls to ensure that all employees are and remain safe regardless of if they work in our corporate offices, the field or our manufacturing facilities.

Crusoe has developed thorough Health, Safety and Environmental (HSE) policies and procedures that meet or exceed the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) requirements, including OSHA’s General Industry Safety and Health Standard [29 CFR 1910](#) and OSHA’s recordkeeping requirements published in [29 CFR 1904](#). We go beyond compliance to achieve safety performance. Our HSE policies and procedures form the basis of Crusoe’s overall HSE Management System and help to validate our programs with clients to exceed their HSE expectations.

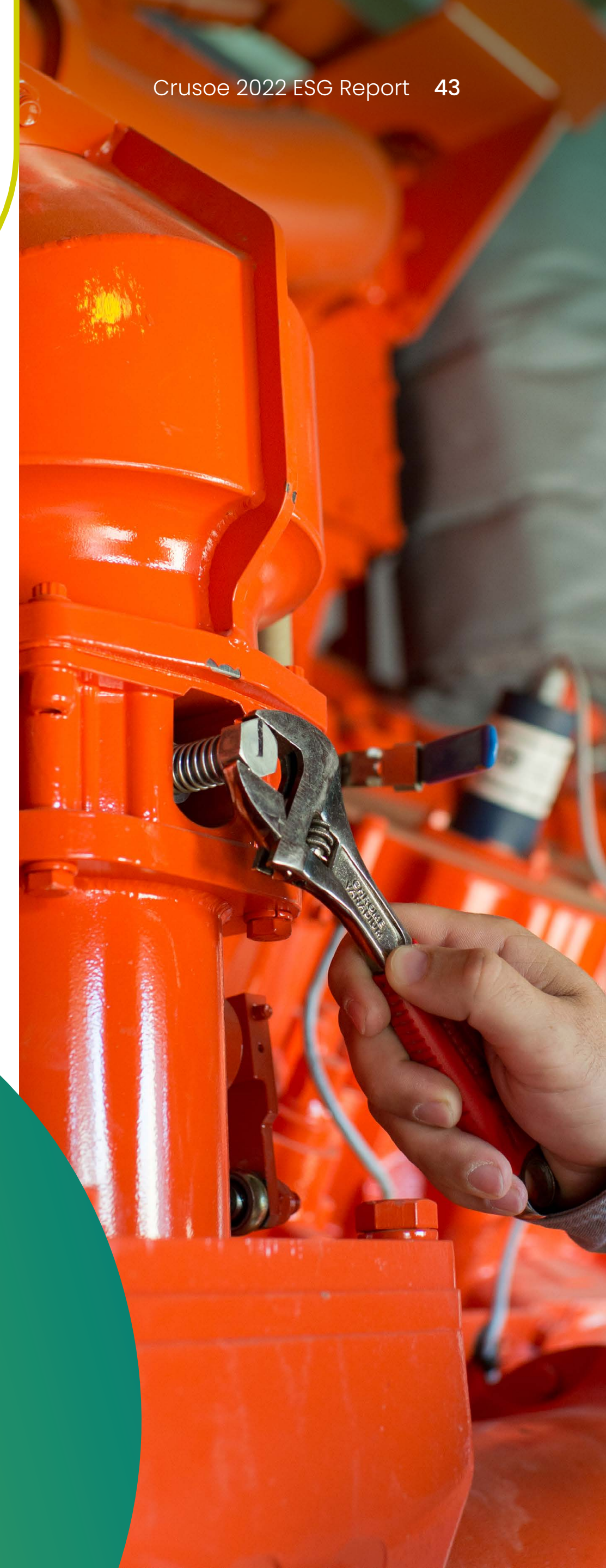
Crusoe’s HSE policies and procedures are published and available to all Crusoe employees for reference and utilization to ensure safe operations.

Crusoe’s employees are required to complete both general and hazard specific safety trainings, as well as applicable operator safety orientations, which provide them with general safety awareness, emergency response actions, hydrogen sulfide (H₂S) training and other safety expectations prior to accessing work sites. Employees also participate in all drills and exercises that may be conducted at project sites.

Due to the high importance Crusoe places on employee wellbeing, safety measures extend to contract workers. Safety requirements are defined in contracts with subcontractors to ensure compliance with general requirements and additional performance standards that go above and beyond regulations.

Compliance to safety rules and regulations is the bare minimum. Defining true safety performance expectations is where Crusoe aims to be.

MICHAEL DUPLANTIS
Senior HSE Director





Caring for Our People

We recognize that safety is not only something enacted top-down, but also bottom-up.

We adapt to the needs of our employees and listen to their feedback on tools, personal protective equipment (PPE) and other required materials to provide adequate protections.

Clear incident notification, response and resolution protocols are in place and involve a third-party case management company that provides medical assistance and support to employees if they are injured at work.

Due to our robust HSE policies and procedures, we reached two full years and over 650,000 man-hours worked without a recordable injury to an employee or contractor as of the end 2022.

The most significant potential hazards, which differ for manufacturing and field operations due to site-specific risks, have been identified via site walk-throughs and worker consultations.

Manufacturing facility

Key activities: welding, cutting, metal work, operating machinery, electrical equipment and other equipment, etc.

- Use of PPE including, as appropriate, safety glasses, gloves, hearing protection, respiratory protection, etc.
- Training for specific equipment and tasks.
- Inspections (both documented and informal) of the workplace, tools, equipment and machinery to mitigate remaining hazards.

Oil field and data center operations

Key activities: operating in active oil fields, operating generators, electrical equipment and computing equipment

- Use of PPE including, as appropriate, fire retardant clothing, steel toe boots, multi-gas detectors (including H₂S), gloves, hearing protection, etc.
- Driving safety for both U.S. Department of Transportation (DOT) regulated drivers as well as other non-regulated drivers of company trucks and vehicles.





Investing in Our Local Communities

As a company, our success depends on the communities in which we operate. We will continue to invest in them and grow our community programs.

Investing in STEM Education

Crusoe contributes to several initiatives by volunteering our time, expertise and financial resources. We support programs that bring science, technology, engineering and math (STEM) to public schools and the local communities where we operate. We believe that the pathway to creating more equitable outcomes is providing greater equity in opportunity, with education being the most important foundation. Providing greater access to STEM education resources is one of the highest impact long-term investments we can make in our local communities and enable the next generation of innovators, scientists and entrepreneurs from all backgrounds to create value for society.

The two locations where we have focused these efforts are Denver, where we are headquartered and North Dakota, where we have significant operations. In Denver, we supported the Denver cohort of CSforALL's Accelerator Program, which introduced computer science education programs to K-12 students in the Denver Public Schools system. In North Dakota, we have donated to several charitable programs that support STEM education across the state – including uCodeGirl and Gateway to Science.

Additionally, we help to increase rural connectivity, which promotes access to education, healthcare and innovation. Broadband access in rural areas has been linked to increased job and population growth, higher rates of new business formation and home values, and lower unemployment rates. The deployment of our data centers in primarily rural areas has required the expansion of networking infrastructure to support high capacity and low latency connectivity. We partnered with Dakota Rural Networks to expand innovative networking solutions throughout North Dakota. As a result, local communities have benefited from the addition of fiber-based high bandwidth, low latency connectivity in the region.

As Crusoe grows in size and geographic coverage, our intent is to invest additional resources into our community engagements. We are committed to fulfilling our mission of aligning the future of the climate with the future of computing and that includes meaningful investment in the communities in which we operate.

Impact through Advanced Computing

Our efforts to do good are not reserved solely for the communities in which we operate. Crusoe Cloud enables us to donate remote computing capacity to support innovation.

Crusoe has worked with the Folding@Home Consortium, a distributed computing system for life-science research launched out of Stanford University. Through this partnership, researchers can remotely utilize Crusoe's computational resources for vaccine research and discovery. This ongoing work included assisting the Consortium's protein folding simulation project specifically targeting vaccines and therapeutic antibodies for COVID-19 in 2020.

Corporate Volunteerism

Outside of our direct involvement with communities, Crusoe also encourages employee volunteerism and supports employees who organize volunteer events. We are currently exploring ways to formalize a company volunteerism program in 2023.





Governance

Crusoe's governance framework embeds sustainability in business strategy, operations and stakeholder interactions.

2022 Achievements



Established **Executive -level ESG Committee** and hired **Senior Director of ESG**.



Developed **Sustainable Project Selection Framework** and **Code of Conduct**.



Became a supporter of the **Crypto Climate Accord**.



Operating with a Clear Governance Structure

Crusoe has established a clear organizational structure and strong frameworks to support our sustainability governance.

Board Governance

Crusoe is a privately-owned company and our Board of Directors includes our co-founders and key investors. Currently there are 8 Board votes split between the co-founders and our investors. In 2023, we will establish an audit committee and compensation committee.

Our investors include leading climate tech venture funds including G2 Venture Partners (who led our last equity round and maintains a seat on our Board of Directors), Lowercarbon Capital, My Climate Journey, Inclusive Capital Partners, Engine No. 1, and FootPrint Coalition. They hold us accountable for ESG by requesting not just financial updates, but also ESG data and updates.

ESG Governance

Crusoe's ESG activities are spearheaded by Crusoe's Senior Director of ESG, who works cross-functionally with teams across the company to implement and support our various ESG initiatives. She leads Crusoe's annual carbon accounting, manages Crusoe's portfolio of carbon credit projects, monitors, tracks and reports on Crusoe's ESG progress and impacts and ensures that Crusoe's ESG principles are embedded into our business decisions and activities.

She partners closely with Crusoe's Head of Public Affairs, who has deep sustainability and policy experience. Together, they work to implement a robust external engagement and advocacy strategy that encourages the development of supportive public policies promoting methane mitigation and responsible energy use in computing as a part of climate policies at the state and federal levels.

Crusoe also has an executive-level ESG Committee composed of Crusoe's CEO, Chief Financial Officer (CFO), COO, General Counsel and Senior Director of ESG. The ESG Committee typically meets monthly to provide oversight and serve as the decision makers when ESG-related issues need to be escalated to ensure we stay aligned with our mission. In addition, the ESG Committee reviews and approves Crusoe's ESG framework, strategy and objectives at least annually.





Operating with a Clear Governance Structure

Crusoe's Sustainable Project Selection Framework

To guide Crusoe's business decisions, we developed our Sustainable Project Selection Framework, a set of minimum ESG criteria for each of Crusoe's business streams that ensure that we stay true to our mission of aligning the future of computing with the future of the climate.

In addition to financial returns, our investment decisions take into account a range of potential ESG impacts such as the scale of potential emissions reduction and the incentivization of additional renewable capacity generation. All of our projects are expected to meet a set of minimum ESG criteria under our Sustainable Project Selection Framework.

Under our Sustainable Project Selection Framework, all Digital Flare Mitigation projects must contribute to reduced flaring by utilizing stranded natural gas that would otherwise be flared by operators. This means Crusoe does not purchase natural gas from operators that have access to sufficient pipeline capacity or can sell their natural gas to downstream markets at our site of purchase. We will also only work with operators that are drilling wells on the basis of oil economics in order not to incentivize additional drilling for gas.

External Partnerships

Crusoe operates at the intersection of various industries and has formed partnerships that aim to accelerate climate initiatives and solutions across sectors.

On the oil and gas side, Crusoe works with state-level oil and gas associations such as the [North Dakota Petroleum Council](#) and [Montana Petroleum Association](#) to advance supportive legislation that encourages the reduction of flaring and methane emissions by encouraging beneficial use of flared natural gas. Crusoe also engages with other organizations focused on reducing flaring and methane emissions. For example, we have engaged with the [World Bank's Zero Routine Flaring by 2030](#) initiative, which has highlighted Crusoe's DFM technology in its reports.

To promote sustainability within the cryptocurrency sector, Crusoe became a supporter of the [Crypto Climate Accord](#), a private-sector led initiative focused on decarbonizing the cryptocurrency and blockchain industry, in December 2022 to contribute to the development of solutions that will help the industry move towards the use of carbon-free energy sources. Crusoe is also partnering with the [Sustainable Bitcoin Protocol](#) (SBP) to develop and pilot methodologies for using renewable energy and waste gas for Bitcoin mining. SBP is defining a process that captures the value of Bitcoin mined using clean energy by creating a new permanent on-chain asset called the Sustainable Bitcoin Certificate (SBC). SBC is a tokenized environmental asset that can be held alongside Bitcoin to ensure an investor's holdings are verifiably climate-positive and exceed their environmental goals. Crusoe also engages with industry trade associations like the Blockchain Association and Digital Chamber of Commerce that advocate on behalf of the crypto industry.





Assessing Climate Opportunities and Risks

Capturing climate opportunities is inherent to Crusoe's business. We also analyze and prepare for risks brought by climate change.

Climate Opportunities

Capturing climate opportunities is core to Crusoe's business. We saw that addressing the climate challenge posed by the flaring of natural gas in oil production could help solve the climate challenge posed by computing, which is energy-intensive and rapidly growing.

Crusoe harnesses and turns wasted energy into a valuable resource that powers clean computing, thereby minimizing the emissions associated with energy production as well as the footprint that computing has on the environment.

Crusoe began by deploying our DFM technology to oil fields in the U.S. to harness flared natural gas from oil production to power modular data centers. While we began by operating in the U.S., flaring is not a localized phenomenon: it occurs all over the world and up to 20% of the world's oil is produced in association with flares. With our planned expansion to the Middle East in 2023, Crusoe will continue to make strides in reducing flaring.

Similarly, Crusoe sees opportunities to support the acceleration of the deployment of more renewables on the grid through our DRO approach. By bringing our modular data centers as behind-the-meter loads to clean and renewable electricity sites, we can reduce the need to curtail generation, improve the economics of clean energy assets and utilize the electricity to cleanly power energy-intensive computing applications.

Climate Risks

Crusoe, like other companies, is affected by the physical impacts of climate change. Crusoe's U.S. operations in Montana, North Dakota and Colorado are affected by weather conditions and increasingly extreme temperatures and weather events in both the winter and summer have the ability to disrupt our operations.

To operate effectively under a range of weather conditions, Crusoe's DFM systems are designed with building heaters and fans or canopies to enable operates from -20°F (-29°C) to 105°F (41°C), a large temperature range that can be further expanded by deploying precautions and operational protocols to minimize outages. Each of our installations is equipped with video monitoring and software that can automatically respond to changes in weather conditions as needed and quickly alert our operations and field teams when human intervention is required.





Fostering Business Ethics and Compliance

Crusoe promotes business ethics and compliance internally and with all our stakeholders, from project partners to supply chain vendors and customers.

Code of Conduct

In 2022, Crusoe established a Code of Conduct, which sets high standards of integrity, honesty and fair dealings for all Crusoe employees and contractors when acting on Crusoe's behalf.

Crusoe's compliance framework also includes policies regarding sanctions and trade, export controls, anti-bribery/anti-corruption and antiboycott, which ensure compliance with all applicable U.S. laws and regulations.

Crusoe employees are subject to compliance training and receive a certification upon completion.

Supply Chain Engagement

Crusoe recognizes the ways in which an ethical supply chain can impact business and holds it as a priority. In 2022, Crusoe established standard agreement terms to govern its relationship with suppliers, including clauses on fraud, liability, insurance, intellectual property, confidentiality and safety. In addition, members of the Procurement team are subject to mandatory training on ethical bidding practices and procurement.

Data Privacy and Security

Crusoe is committed to ensuring the privacy and security of our customers' data. The company meets or exceeds widely accepted data security and customer privacy standards to protect sensitive information from unauthorized access or theft and provides customers industry standard Service Level Agreements (SLAs) guaranteeing availability and performance. Crusoe is actively seeking SOC 2 Type 1 compliance certification for Crusoe Cloud in 2023 and is investigating other compliance certifications.

We have a robust set of legal terms that protect customer privacy and security on Crusoe Cloud, available on our [website](#).

Crusoe continuously monitors our systems and works to enhance our security against emerging threats. This includes regular security audits, penetration testing and employee training programs to ensure that sensitive information is handled with the highest level of care and protection.





Appendix



About Our Reporting

This is Crusoe's first ESG report, covering calendar year 2022.

This new report sets a baseline for our ESG activity moving forward and will be issued annually. We prepared this report informed by the GRI Universal Standards. We also utilized other ESG-related frameworks and best practices to guide our reporting including the GHG Protocol Corporate Accounting and Reporting Standard, SASB, TCFD and UN Sustainable Development Goals.

Unless otherwise stated, our reporting covers all facilities where Crusoe has operational control, which includes owned manufacturing facilities, corporate offices, warehouses and on-the-ground operations. References such as "currently," "so far" or similar expressions reflect information as of Dec. 31, 2022, unless otherwise noted. Some achievements from early 2023 are included in the report to provide the most relevant information to stakeholders. To the extent possible, we determined such information was gathered and reported accurately and that the underlying assumptions and methodologies are sound.

While certain matters discussed in this report may be significant, any significance should not be read as necessarily rising to the level of materiality, even if the word "material" or "materiality" is used in this report.

Certain statements in this report are "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. These statements are based on management's current expectations and are subject to known and unknown risks, uncertainties, changes in circumstances and assumptions that are difficult to predict and are often beyond our control. These statements are not guarantees of future results, occurrences or performance.

Actual results and financial outcomes may differ materially from those included in any of these forward-looking statements due to a variety of factors, including, but not limited to, the precautionary statements included in this report, as well as the following factors: global sociodemographic and

economic trends, climate-related conditions and weather events, energy prices and technological innovations, client behavior, data limitations and uncertainty, legislative and regulatory changes and other unforeseen events or conditions. Any forward-looking statements made by or on behalf of the company speak only as to the date they are made and the company does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made.

Nothing in this presentation constitutes a solicitation, recommendation, endorsement or offer by any party to buy or sell any securities or other financial instruments in any jurisdiction. You are solely responsible for consulting independent and qualified legal and financial advisors and evaluating the risks and merits associated with the use of any information provided in this report. We expressly recommend that you seek advice from legal and tax professionals. There are significant risks associated with investing in securities and you may lose money. Your use of any information from this report is at your own risk.

While we have tried to ensure the accuracy and completeness of the contents herein, we cannot offer any undertaking or guarantee, either expressly or implicitly, regarding how correct, complete or up to date the contents of this report are. Our past performance does not necessarily predict future results. We are not a registered investment, legal or tax advisor. We accept no liability for any loss or damage whatsoever arising out of the use of this report or reliance on the content herein.

We reserve the right to supplement this report at any time or to change or delete any information contained or views expressed herein.





GRI and SASB Index Table

General Disclosure

Framework	Disclosure Code	Disclosure or Reference to Report Section
GRI 2: General Disclosures 2021	2-1: Organizational details a. Organization's legal name b. Nature of ownership and legal form c. Headquarters location d. Countries of operation	a. Crusoe Energy Systems LLC b. Privately-owned company c. Denver, CO d. United States
	2-2: Entities included in the organization's sustainability reporting	About Us / Our Business / A Dual-Industry System to Drive Impact
	2-3: Reporting period, frequency and contact point a. Reporting period and frequency b. Reporting period for financial reporting c. Publication date d. Contact point	a. Full year 2022, reporting annually b. No public financial reporting as the company is privately-owned c. May 2023 d. info@crusoeenergy.com
	2-6: Activities, value chain and other business relationships a. Sector(s) in which Crusoe is active b. Crusoe's value chain, including: I. The organization's activities, products, services and markets served; II. The organization's supply chain; III. The entities downstream from the organization and their activities c. Relevant business relationships	a. About Us / Our Business / A Dual-Industry System to Drive Impact / Climate-Aligned Computing / Capturing Wasted Energy / Manufacturing for Clean Energy and Computing b. I. and II. About Us / Our Business / Crusoe's Clean Computing Business / Climate-Aligned Computing / Capturing Wasted Energy / Manufacturing for Clean Energy and Computing b. III and c. No other entities downstream or relevant business relationships other than reported above
	2-7: Employees a. Total number of employees with breakdown by gender and region c. Methodologies and assumptions used to compile the data	a. At the end of 2022 Crusoe had approximately 300 employees, of which 22% were women and 78% were men c. Crusoe's HR system



Framework	Disclosure Code	Disclosure or Reference to Report Section
GRI 2: General Disclosures 2021	2-22: Statement on sustainable development strategy Statement from the most senior executive about the relevance of sustainable development to the organization	About Us / Letter from the Founders
SASB Software & IT Services	TC-SI-130a.3 Discussion of the integration of environmental considerations into strategic planning for data center needs	About Us / Our Business / Climate-Aligned Computing Our ESG Journey / Governance / Assessing Climate Risks and Opportunities

Environmental

Framework	Disclosure Code	Disclosure or Reference to Report Section
GRI 302: Energy 2016	302-1: Energy consumption within the organization a. Total fuel consumption from non-renewable sources b. Total fuel consumption from renewable sources c. Electricity, heating, cooling and steam consumption d. Electricity, heating, cooling and steam sold e. Total energy consumption in joules f. Standards, methodologies, assumptions and/or calculation tools used	a. Over 4 billion cubic feet of natural gas that would otherwise be flared b. Not material c. Crusoe purchased 4,800MWh of electricity from the grid for our offices, warehouses and operations d. Crusoe generated over 500,000MWh of power using flared gas (over 4 billion cubic feet) e. 1,800,000 GJ f. The power Crusoe generated is metered and captured in Crusoe's systems. The power we purchased came from utility invoices
GRI 305: Emissions 2016	305-1: Direct (Scope 1) GHG emissions a. Gross direct (Scope 1) GHG emissions in metric tons of CO ₂ equivalent b. Gasses included c. Biogenic CO ₂ emissions d. Base year for the calculation e. Source of the emission factors and global warming potential rates f. Consolidation approach g. Standards, methodologies, assumptions and/or calculation tools used	a., e., f., g. Our ESG Journey / Environmental / Managing Our Emissions b. All gasses c. Not relevant d. Emissions calculated for 2021 and 2022



Framework	Disclosure Code	Disclosure or Reference to Report Section
GRI 305: Emissions 2016	305-2: Energy indirect (Scope 2) GHG emissions	a., b., e., f., g. Our ESG Journey / Environmental / Managing Our Emissions c. All gasses d. Emissions calculated for 2021 and 2022
	a. Gross Location-based energy indirect (Scope 2) GHG emissions in metric tons of CO ₂ equivalent b. Gross Market-based energy indirect (Scope 2) GHG emissions in metric tons of CO ₂ equivalent c. Gasses included d. Base year for the calculation e. Source of the emission factors and global warming potential rates f. Consolidation approach g. Standards, methodologies, assumptions and/or calculation tools used	
	305-3: Other indirect (Scope 3) GHG emissions	a., f., g. Our ESG Journey / Environmental / Managing Our Emissions b. All gasses c. Not relevant d. Not relevant e. Emissions calculated for 2021 and 2022
	a. Gross other indirect (Scope 3) GHG emissions in metric tons of CO ₂ equivalent b. Gasses included c. Biogenic CO ₂ emissions d. Other indirect (Scope 3) GHG emissions categories and activities e. Base year for the calculation f. Source of the emission factors and global warming potential rates g. Standards, methodologies, assumptions and/or calculation tools used	
	305-4: GHG emissions intensity	a. 0.47 metric ton of CO ₂ equivalent / MWh generated using flared gas b. MWh generated using flared gas c. Direct (Scope 1), energy indirect (Scope 2) d. All
	a. GHG emissions intensity ratio b. Organization-specific metric (the denominator) chosen to calculate the ratio c. Types of GHG emissions included in the intensity ratio d. Gasses included	
SASB Software & IT Services	TC-SI-130a.1	1. 1,800,000 GJ 2. 1% 3. 100% of grid electricity is renewable (through purchase of U.S. RECs)
	1. Total energy consumed 2. Percentage grid electricity 3. Percentage renewable	



Social

Framework	Disclosure Code	Disclosure or Reference to Report Section
GRI 401: Employment 2016	401-1: New employee hires and employee turnover a. Total number and rate of new employee hires by age group, gender and region	Crusoe nearly doubled in size in 2022 to nearly 300 employees (breakdown not available)
	401-2: Benefits provided to full-time employees that are not provided to temporary or part-time employees a. Benefits which are standard for full-time employees that are not provided to temporary or part-time employees b. Definition used for 'significant locations of operation'	a. Our ESG Journey / Social / Caring for Our People: Employee Benefits b. Not relevant
	401-3: Parental leave a. Total number of employees entitled to parental leave, by gender	100%
GRI 403: Occupational Health and Safety 2018	403-1: Occupational health and safety management system a. Statement of whether an occupational health and safety management system has been implemented b. Scope of workers, activities and workplaces covered by the occupational health and safety management system	a. Our ESG Journey / Social / Caring for Our People: Employee Health and Safety b. 100%
	403-2: Hazard identification, risk assessment and incident investigation a. Processes used to identify work-related hazards b. Processes for workers to report work-related hazards d. Processes used to investigate work-related incidents	Our ESG Journey / Social / Caring for Our People: Employee Health and Safety
	403-4: Worker participation, consultation and communication on occupational health and safety a. Processes for worker participation and consultation in the development, implementation, and evaluation of the occupational health and safety management system	Our ESG Journey / Social / Caring for Our People: Employee Health and Safety



Framework	Disclosure Code	Disclosure or Reference to Report Section
GRI 403: Occupational Health and Safety 2018	403-5: Worker training on occupational health and safety a. Occupational health and safety training provided to workers, including generic training as well as training on specific work-related hazards	Our ESG Journey / Social / Caring for Our People: Employee Health and Safety
	403-6: Promotion of worker health a. Facilitation of workers' access to non-occupational medical and healthcare services, and the scope of access provided b. Description of voluntary health promotion services and programs offered to workers	Our ESG Journey / Social / Caring for Our People: Employee Benefits
GRI 404: Training and Education 2016	404-2: Programs for upgrading employee skills and transition assistance programs a. Type and scope of programs implemented and assistance provided to upgrade employee skills	Our ESG Journey / Social / Caring for Our People: Employee Attraction, Development and Retention
	404-3: Percentage of employees receiving regular performance and career development reviews a. Percentage of total employees by gender and employee category who received a regular performance and career development review	100%
GRI 405: Diversity and Equal Opportunity 2016	405-1: Diversity of governance bodies and employees b. Percentage of employees per employee category by gender, age group and other indicators	Our ESG Journey / Social / Caring for Our People: Diversity Metrics
SASB Hardware	TC-HW-330a.1 Percentage of gender and racial/ethnic group representation for: 1. Management 2. Technical staff 3. All other employees; efforts to recruit from and develop diverse talent pools	Our ESG Journey / Social / Caring for Our People: Diversity Metrics
SASB Software & IT Service	TC-SI-330a.2 Employee engagement as a percentage; non-monetary benefits to improve employee engagement and therefore retention and productivity	Our ESG Journey / Social / Caring for Our People: Employee Attraction, Development and Retention

Governance

Framework	Disclosure Code	Disclosure or Reference to Report Section
GRI 201: Economic Performance 2016	201-2: Financial implications and other risks and opportunities due to climate change a. Risks and opportunities posed by climate change that have the potential to generate substantive changes in operations, revenue or expenditure	Our ESG Journey / Governance / Assessing Climate Opportunities and Risks (no quantified impact of climate-related risks and opportunities available yet)
GRI 2: General Disclosures	2-9: Governance structure and composition b. List the committees of the highest governance body that are responsible for decision making on and overseeing the management of the organization's impacts on the economy, environment, and people	Our ESG Journey / Governance / Operating with a Clear Governance Structure: ESG Governance



UN SDGs Index Table

The United Nations Sustainable Development Goals (UN SDGs) are 17 goals that aim to tackle climate change holistically by targeting multifaceted issues, including eliminating poverty and inequality, addressing climate change and environmental degradation, and achieving peace and justice.

We recognize that by focusing on our sustainability efforts, Crusoe can support the advancement of the UN SDGs.

Through our analysis, we have identified four goals that are relevant to Crusoe and through which we can enact the most change.

- UN SDG 4: Quality education
- UN SDG: 8: Decent work and economic growth
- UN SDG 9: Industry, innovation and infrastructure
- UN SDG 13: Climate Action

4. Quality education



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

We foster education internally and externally. We encourage our employees to be and become their best self through conscious learning and provide ample opportunities for growth and development. When it comes to the communities in which we operate, we contribute to several initiatives by volunteering our time, expertise and financial resources. We support and organize programs that bring science, technology, engineering and math (STEM) to public schools and the local communities where we operate.

8. Decent work and economic growth



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

As Crusoe grows, we are creating high-quality jobs for employees with different backgrounds, expertise and skill sets. Our company culture and values create opportunities for unifying employees from diverse backgrounds that results in a stronger company with increased productivity, collaboration and innovation.

9. Industry, innovation and infrastructure



Build resilient infrastructure, promote sustainable industrialization and foster innovation.

Crusoe's business model is based on sustainability and innovation. Crusoe deploys clean computing infrastructure, powered by our DFM technology, which provides a cost-effective solution to reduce methane emissions from natural gas flaring during oil production. Our technology has been recognized as an [innovative application](#) by the World Bank's flaring mitigation initiative, the Global Gas Flaring Reduction Partnership. In addition, Crusoe Industries also manufactures the electrical systems and infrastructure that enable the clean energy and computing industries.

13. Climate Action



Take urgent action to combat climate change and its impacts.

Crusoe's technologies help to align the future of computing with the future of the climate by harnessing wasted and stranded energy resources to power energy-intensive computing applications. In 2022, Crusoe diverted over 4 billion cubic feet of gas from flaring by using it to generate the electricity that powers our modular data centers. This led to the avoidance of approximately 509,000 metric tons of CO₂e emissions. We hope to reach more than 1 million metric tons of lifetime avoided CO₂e emissions in the next year.



Crusoe